S. HRG. 103-671

MANUFACTURING JOB LOSSES AND THE FUTURE OF MANUFACTURING EMPLOYMENT IN THE UNITED STATES

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JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

OCTOBER 5, 1993

Printed for the use of the Joint Economic Committee

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CONTENTS

WITNESSES AND STATEMENTS FOR THE RECORD

TUESDAY, OCTOBER 5, 1993

	PAGE
Hamilton, Hon. Lee H. Hamilton, Member, Joint Economic Committee: Opening statement	1
Braverman, Philip, Chief Economist and Senior Vice President, DKB Securities Corporation	2
Carvevale, Anthony P., Chair, National Commission for Employment Policy; and Chief Economist, American Society for Training and Development	7
Gorte, Julie Fox, Senior Associate, Office of Technology Assessment	10

SUBMISSIONS FOR THE RECORD

Mr. Braverman: Prepared statement	30
Article entitled " Growth Recession"	39
Article entitled "The New-Age Economy"	44
Ms. Gorte: Prepared statement	50
Representative Ramstad: Written opening statement	56

MANUFACTURING JOB LOSSES AND THE FUTURE OF MANUFACTURING EMPLOYMENT IN THE UNITED STATES

TUESDAY, OCTOBER 5, 1993

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The Committee met, pursuant to notice, at 10:00 a.m., in room 2359, Rayburn House Office Building, Honorable Lee H. Hamilton (Member of the Committee) presiding.

Present: Representative Hamilton.

Also present: William Buechner, Chad Stone, Steve Baldwin, Susan Lepper, Stephen Rose, Chris Frenze, Caleb Marshall, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, MEMBER

REPRESENTATIVE HAMILTON. Good morning. The session of the Joint Economic Committee will come to order.

The meeting is to examine the future of manufacturing and manufacturing jobs in the United States. The focus of our concern today is the loss of one-tenth of our manufacturing jobs during the past four-and-a-half years and what, if anything, to do about it.

Since January 1989, employment in manufacturing has fallen by almost 1.8 million, or an average of almost 32,000 jobs per month. To put this in perspective, the average Fortune 500 firm employs 23,600 workers, so we have been losing the equivalent of almost one-and-a-half Fortune 500 firms each month for more than four-and-a-half years.

This is not the first time the U.S. economy has lost manufacturing jobs. There have been ups and downs throughout the postwar period, but the job loss in the past has almost always been related to recessions, and then the jobs came back when the economy started to recover again. During this recovery, however, we have continued to lose manufacturing jobs, 780,000 since the recession officially ended in March 1991, which, in fact, is more manufacturing jobs than were lost during the recession itself.

Unfortunately, this trend does not seem to be coming to an end. Troubled companies are eliminating jobs by tens of thousands and even

profitable companies with booming sales are shedding jobs. Week after week, there are stories in the newspapers of big firms announcing new cuts in jobs. Many people wonder whether they will be able to keep or find good jobs in the face of all the changes that are taking place in the economy, and there is a lot of anxiety about whether the U.S. economy can deliver jobs with reasonable pay in this competitive world economy.

Today's hearing will focus on several questions: What has been happening in U.S. manufacturing industries to explain the loss of 1.8 million jobs since January 1989? Is U.S. manufacturing able to compete effectively in the world economy? Has the recent decline in manufacturing jobs been the consequence of competition in the world economy or because of domestic economic problems and policies? How essential is manufacturing to a modern economy? What are the consequences for the American economy and the American workers of the decline in manufacturing and manufacturing jobs? If it is important to strengthen manufacturing and reverse the job loss, should the government adopt specific measures to strengthen individual industries, or should it rely on general macroeconomic policies that focus on the economy as a whole?

The Joint Economic Committee is pleased to welcome three witnesses this morning, Mr. Anthony P. Carnevale, Chair, National Commission for Employment Policy, and Vice President and Chief Economist, American Society for Training and Development; Ms. Julie Fox Gorte, Senior Associate, Office of Technology Assessment; and Mr. Philip Braverman, Chief Economist and Senior Vice President, DKB Securities Corporation.

You all have statements. They are very good statements. They will be entered into the record in full, and what I would like you to do is to begin now with just a summary of those statements, hitting the highlights for us, if you could, so that we could have time for questions and dialogue.

Mr. Braverman, we will start with you and just go across the table—unless there is some other order you prefer. It doesn't make any difference to me. Is it all right to proceed that way? I believe the lady at the last says that is still okay. Is that right? Let's go ahead.

Mr. Braverman, please proceed.

STATEMENTS OF PHILIP BRAVERMAN, CHIEF ECONOMIST AND SENIOR VICE PRESIDENT, DKB SECURITIES CORPORATION

MR. BRAVERMAN. It is very nice to be with you today and thank you for inviting me.

I would like to start by indicating that the situation we are in is unique or unusual for modern times. We have left what appeared to be a somewhat normal recession and the hope was that we would move into a somewhat normal recovery, but that is not essentially what is happening. We are in a long period of stagnation. We are, in effect, in a disguised depression.

Now, the term "depression" I don't use lightly. It is a long period of adjustment to fundamental problems that will continue for an extended period and require a recognition of those problems in order to deal effectively with them. The reason that the recession was somewhat shallow, but more important, the recovery stagnant and disappointing, is that the U.S. economy has not resolved the problems that brought us the recession and this long period of stagnation. So I think it is important to sketch out some of those problems that we are dealing with.

We have, as a result of a long period of inflation, put in place policies and adjustments that, in effect, have guided us for two decades. We have put in place huge increases in labor because of an inflationary bias, an inflationary environment that is assumed to continue. But we do not have an inflationary environment any longer. We have the beginnings of a deflationary environment, in effect, a period in which companies are competing very strenuously to reduce costs, to reduce prices to maintain a share of market.

We have also a huge problem with a credit crunch, partly due to excesses of borrowing in the last two decades. That borrowing put in place a huge debt burden on individuals, businesses and governments, and we are trying to deal with that debt. Unfortunately, the investments that were financed by that debt were imprudent. They were literally squandered in empty office space and inflated values of LBOs—leveraged buyouts. The end result is that GDP did not rise commensurately, as it normally does with the debt, and we are still struggling to deal with the excesses of that debt.

We have an intense credit crunch. There is very little borrowing taking place in this country. The private-sector borrowing is increasing at about 3 percent annually. That is roughly half the rate of growth normal in a recession and one-third the rate of growth typical in a recovery.

Now, I could go on and talk about some of these problems, but I think that what we have here is a recognition error. It is not merely a sluggish recovery. It is a long period of stagnation that needs to be addressed. We are acting as if inflation is still a major threat, as if the problem is merely one of inadequate confidence, when the reality is that we have an adjustment process that we must get through. And that needs the assistance of the Federal Government, the cooperation of businesses and the consumer, in a global sense, to deal with it effectively.

As a result, I think I would like to turn to some of the solutions that I see that are appropriate. We are acting as if, as I said, we are confronted with an inflationary environment. That has caused the Fed to be ultra cautious in its easing. Now, I do not believe that the Fed has adopted an easy credit policy. The Fed has been very tight fisted. I draw this conclusion not because they have not reduced interest rates. They have. But that doesn't mean a thing. The proof of the pudding, so to speak, is in the eating. If there was credit growth, then we would

have a basis for adjusting the economy, but there is no credit growth to speak of.

The Fed is not taking the appropriate steps necessary to stimulate borrowing. Banking, in particular, is not making the loans necessary. Businesses depend very heavily, particularly small- and medium-sized businesses, on banks. This is at the forefront of the expansion in manufacturing: creating jobs and investment in a recovery. Those businesses are not getting credit.

Over the last few years, bank lending to business has declined. That should not be taking place in this kind of an environment. So as a result, I think that the Federal Reserve, in its regulatory responsibility, is falling far short of what is necessary.

I recommend that there be a moratorium on the increase in capital requirements on banks, or better still, a rollback. That would help the banks expand their lending. There should be a lessening in the stringency of bank examination. It is my view that the bank examiners are overly vigilant in order to prove that they were vigilant in the mid-1980s when they were not. This is literally locking the barn door after the horse has been stolen. It is an inappropriate stringency in a period when the economy is struggling to make loans.

The bank examiners tend to be evaluated on the basis of whether or not they have ferreted out fraud, found lending that is suspiciously speculative. Instead, the examiners should be encouraged to see that the banks make loans that service their community. Their orientation is completely perverse, and that, I think, has hurt business.

I think that there ought to be further reductions in the federal funds rate. There should be further reductions in the discount rate. There should be a moratorium on the BIS capital requirements on banks to move now to 10 percent for a good bank; there should be an encouragement of banks to make loans to small- and medium-sized business, not just to buy the loans from the Resolution Trust Corporation. That will not resolve the problem.

I think there needs to be more leadership in Washington along the lines of proposals that have already been made to encourage exports, to encourage manufacturing to move toward high-tech industries, to provide some industrial policy guidance, as the Japanese have done under MITI, to allow cooperation among major corporations that might now be considered in violation of antitrust legislation.

We need to have pilot projects, much as the program to develop an environmentally sound car. We need to have the cooperation and leadership of industry. I believe that this is a time when leaders, in particular those in technologically oriented fields, should be invited to Washington, sort of as dollar-a-year men, to lead symposiums of their colleagues to discover which are the most viable high-tech approaches for expansion and how we go about cooperating, not competing, but cooperating to develop inroads moving toward industry viable for the next century.

We need to establish widely agreed upon goals that we work towards, whether they are super computers, or improved transportation systems, or the transportation of energy long distances, but I am not a specialist in these areas. I believe that there ought to be an opportunity given to industry to make its contribution to the guidance of industry in cooperation with government.

We need to have an aggressive export policy. We have begun to move in that direction. I am all for that. We need to have the cooperation and the guidance and the leadership of government to help businesses see where those opportunities are, to help them finance it, to help them make the contacts overseas, and to have the coordination that is necessary, particularly for small- and medium-sized businesses that are not adequately export oriented.

I am afraid that most business in the United States is not adequately export oriented, and thus far, our government has not been either. We ought to consider changes in tax policy, such as a shift to a value-added tax, that can be utilized as a method of expanding exports. This tax can be rebated on exports and it can be added on imports to allow us to compete on a more level playing field with other countries that have such taxes.

I am also in favor of a role for government in stimulating capital investment, which is crucial. Capital investment, I think, needs and would benefit from the stimulus of a tax relief that would be geared particularly for high-tech capital investment, investment tax credit, hiring credit, things of this nature, I think, would be moves in the right direction and make us a more vigorous competitor internationally.

Unfortunately, businessmen currently are stymied. What we are seeing is a significant plunge in business optimism, and, in fact, in recent weeks we have seen virtually every survey of business sentiment take a nose dive. We have seen a decline in business intentions to hire and to invest. The latest survey shows that a significant increase in the number and proportion of businesses that intend to reduce their capital investment in the fourth quarter. For example, capital investment year-over-year is now forecast to be up only 2 percent; whereas, last quarter for the third quarter, it is expected to be up over 11 percent year-over-year. Thirty percent of manufacturers expect to reduce capital investment, whereas a year ago, only 22 expected to reduce it. So I think that something is going on, and what is going on is a tremendous degree of uncertainty.

That uncertainty for planning and for investment stems from a large number of changes that are taking place in our environment. We are in the midst of a major decline in defense spending. We know that. There are going to be bases closed. We know that. That is causing consumer confidence to decline or remain at recessionary levels. It is also causing businesses to be uncertain as to what the future holds.

We have raised taxes. We have cut spending. We have instituted various other proposals for various other reasons, but the consequences of these are uncertain.

We have a high degree of variability in the exchange rate. The dollar has come down sharply relative to the yen and the mark, but we have not yet seen, nor will we, in my view, a significant increase in exports as a result of that.

But that creates uncertainty. Businesses can't plan for a dollar yen at $1.05 if they think it might go to $1.80, so I would recommend that we take some steps to alleviate the uncertainty.

One step with regard to the exchange rate would be a move toward a fixed exchange rate system. Now, I think it is time to consider institutionalizing the improvement that has taken place in the exchange rate relationships that have been established, and while I do not consider myself an expert in this particular area, those whom I do respect have recommended that we consider moving toward reestablishing links to gold. And I can see the benefits of that.

We ought to take other steps to alleviate the uncertainty that remains in businesses' minds as to which bases will be closed, what defense contracts will be reduced, so we can plan more assiduously for both near term and long term.

I think this is a rather far flung set of proposals, but I want to leave you with what I believe is the essential thought, that we are not struggling here with declines in manufacturing because the recession was a little deeper or a little longer and it is a temporary phenomenon. This is a very long-range problem, very deep seated and requires a change in our thinking, a change in attitude, a recognition that we are dealing with major problems that need major long run solutions. Those solutions must recognize the major problems that stem from deflation, from the cutback in defense spending, and from the huge debt burdens and the reduction in borrowing. All of these problems need to be addressed, recognized and dealt with.

I would just like to spend one moment in amplifying the deflation argument, because I think that it is too often viewed as a positive development.

We have spent much of our lives worrying about inflation and we are very relieved that inflation has come down very significantly, and as a consequence, over the last year, inflation of 3 percent seems very welcome. In fact, over the last four months, inflation is up only one-and-a-half percent in the CPI, but within that there is an element of decline in manufacturing prices in particular, not only in the U.S., but globally, and this is a process that is frightening. It is not a welcome development.

What is happening is that the increases in costs that have taken place, whether they are increases in taxes, increases in wages, or increases in health care costs, can normally be shifted forward to the consumer in terms of higher prices. But in a period when demand is

weak—and now I would say demand is not weak—it is deficient, it is not possible for those price increases to take place to relieve the manufacturer of those cost increases.

So, as a result, the costs are shifted backwards, shifted to the cost of production. In effect, the employee bears those costs. The employee gets laid off; he is replaced by lower cost workers; he loses fringe benefits; the jobs shift to lower cost areas of production; and these are the elements of deflation that make this prospect frightening. They suggest that what has happened in the United States has not improved the employment situation or the profitability of business.

What has happened is that we have set in motion a deflationary environment that has now shifted overseas, so corporations overseas are now about to go through a period of cutbacks, a period of reductions in employment, a period of cuts in their costs, downsizing, layoffs, and that will create a full circle where those pressures will come back again. In fact, they already are. The rate of layoffs in this country is now running 20 percent ahead of where it was in 1991, which was a recession year. And the latest survey suggests that there will be a continuing pickup in layoffs over the next six months. So we are seeing an ever widening effect of this deflationary environment, which is like a whirlpool pulling down demands for labor and wages, and putting further downward pressures on costs. Businesses attempt to cut prices or maintain them in the face of wage and other cost increases in order to maintain their share of market. But they can't do that because there is a deficiency of demand relative to the capacity to produce.

What will happen? Some of the participants will have to leave the competition. They will go bankrupt. The end result is that this process will continue unless something positive changes. This was the situation in the 1930s. What was necessary then is necessary now. Government alone can make a change. Fiscal stimulus can change the economic environment for the better, not fiscal restraint. We have a deficiency of demand that needs to be addressed.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Braverman, together with attachments, starts on p. 30 of Submissions for the Record:]

REPRESENTATIVE HAMILTON. Thank you, sir.

Mr. Carnevale, please proceed.

STATEMENT OF ANTHONY P. CARNEVALE, CHAIR, NATIONAL COMMISSION FOR EMPLOYMENT POLICY; AND CHIEF ECONOMIST, AMERICAN SOCIETY FOR TRAINING AND DEVELOPMENT

MR. CARNEVALE. I am afraid that I am not going to bring much more sunshine to the conversation. I am reminded of a meeting that I went to just a few days ago for medical practitioners. I was introduced as a doctor, and somebody asked my specialty, and the person who intro-

duced me said, no, he is not the kind of doctor that helps people; he is an economist.

Let me take a perspective from manufacturing itself, from industry, and that is that there seems to be two fundamental causes to the loss of jobs in manufacturing—one inevitable, the other essentially healthy but problematic, in the short term, between now and the end of this century.

The first is, as a result of inflation in the 1970s, there was not very much pressure on American manufacturers to let people go in response to competitive changes. That is, we had an environment in which people's wages and paychecks were being devalued rather rapidly by deflation, and there wasn't much pressure to let people go, fire people, or down-size institutions. There wasn't much pressure to shed labor until finally we defeated inflation in the early 1980s. Then, during the 1980s, much of the attention was focused on manufacturing institutions buying each other, or other assets outside manufacturing, as a competitive strategy. As a result, it wasn't until relatively recently that American manufacturers began to focus on restructuring their own organizations in response to competitive pressures, and in these times they are playing with real dollars now and real labor cost; that is, they are trying to reduce costs as aggressively as they can.

And so, to some extent, I think the loss of jobs in manufacturing reflects passive wage restraint in the 1970s and the fact that American manufacturers haven't focused seriously on wage costs until the last seven or eight years.

And, second, a more profound and important process seems to be at work in manufacturing organizations, and that is a basic restructuring of the industry itself, in response to real competitive pressures. By restructuring, I mean a shift from a mass production set of institutions and technologies to a more complex competitive environment in which institutions compete not only on the basis of prices, but on the basis of their ability to produce quality and variety and customized products, and provide good customer service and an acceleration in the process of innovation. In order to meet their new competitive requirements, institutions installed new flexible technology, built more flexible organizational formats, so-called high-performance work systems. In the end, manufacturers substituted fewer but more highly skilled workers in combination with more powerful and flexible technology, in combination with more flexible organizational formats to produce higher levels of output and meet quality standards with fewer people. And that process, I suggest, will go on for some time.

The further difficulty we face is that both these sets of pressures on hiring in manufacturing occur, as has been explained already, in an environment of constrained demand, and the difficulty is that restructuring in an environment of restrained demand results in job losses in an economy that isn't producing enough new jobs. The usual, more optimistic scenario that people point toward is that, hopefully, this restructuring process will move through a series of gears. That is, in

first gear, there is almost always radical downsizing and the substitution of more highly skilled labor, working in combination with new flexible technology and flexible work formats, for a greater quantity of lesser skilled labor. In second gear, one hopes for stability in the overall employment level, and then the fond hope is that at some point there will be a third gear in this process, where we will start to add jobs in manufacturing as a result of the improved performance that restructuring brings.

In the meantime, we continue to suffer job losses in spite of the fact that manufacturing output improves over time and in spite of the fact, I think, in many cases, we can point to the competitiveness of American manufacturing measured along these variety of competitive standards, from quality to basic efficiency.

The policy implication in all this is, it seems to me, twofold. One is that if we can find a way to improve the demand environment, it becomes the balm that heals all wounds in this restructuring process. Arguably, a variety of economists have argued that a lot of the churning and change that we see in manufacturing now is not a whole lot more changing and churning than we saw in the 1950s and early 1960s. The difference between then and now is that we operated then in a period of robust and expanding demand.

Clearly, it seems to me, to some extent, that we don't have much choice. The process of modernizing American manufacturing is one that we must go through in response to competitive pressures, and the strategy for doing that is generally agreed to, I think. It is a strategy that attempts through tax policy and more specific policies like technology policy and industrial extension to modernize manufacturing systems. It is a policy that attempts, where it can, to create additional demand, especially in response to declining demand from the loss of defense production. But we should keep in mind that policies that promote this modernization process, that allow manufacturers to install new technology and new kinds of flexible work processes and use fewer but more highly skilled workers, unless demand is much more robust than I think any of us can foresee in the near-future, given restraints in spending and restraints in growth, this process will continue to result in a general reduction in overall manufacturing employment.

It seems to me that the process itself will probably last several years, and at some point we will come out of it. What we do in the meantime to affect demand seems to me, given the current restraint on federal spending and the current constrained demand on the global economy, has to be fairly targeted. I would focus on export and, to the extent possible, on building some more targeted policies as a substitute for the decline in defense production that will drive manufacturing by spending in the federal budget.

[Mr. Carnevale did not submit a written statement:]

REPRESENTATIVE HAMILTON. Thank you Mr. Carnevale.

Ms. Gorte, please proceed.

STATEMENT OF JULIE FOX GORTE, SENIOR ASSOCIATE, OFFICE OF TECHNOLOGY ASSESSMENT

MS. GORTE. So far as we know, manufacturing is absolutely essential to a healthy developed economy, even though in the United States it employs only about one in six workers directly. There is no advanced nation on earth that doesn't depend on a healthy manufacturing sector, and when that manufacturing sector gets less healthy, the nation becomes less advanced.

In the 1970s and the 1980s, and in some cases throughout the postwar period, the competitiveness of American manufacturing sectors declined and that took a toll on American economic growth and standards of living. We started to see manifestations of that in the 1970s and 1980s with stagnating growth in standards of living for about 80 or 90 percent of Americans.

Most of the reason for our loss of competitiveness in manufacturing can be attributed to the resurgence of the economies of Europe and Asia that were devastated during the war, and I think there are some lessons we can learn from those economies. Since the late 1980s, a few sectors have staged modest comebacks and part of that was due to government policy. Most of it was due to redoubled efforts on the part of the private sector to improve competitiveness. It may well not be sustainable because, as the other two witnesses have pointed out, we don't have in place a full set of policies that would permit the kind of expansion and investment that we need to engage in to really keep the ball rolling.

Manufacturing is important to the economy for several reasons. You put your finger on one of them, employment. In general, manufacturing jobs pay better and have superior benefits to jobs in other sectors, and people who lose manufacturing jobs are typically able to find new ones only at lower pay, lesser benefits, or both. For that reason alone, shrinking employment is a cause for concern.

Manufacturing also affects our standards of payments through our balance of payments in international trade accounts. Goods trade still accounts for the majority of trade around the world, mostly because most goods can be stored and shipped and a lot of services can't.

Starting in the 1970s and really accelerating in the 1980s, we started to accumulate really chronic and large trade deficits, even with significant diminution in the dollar's value in the latter half of the 1980s.

As long as we produce less than we consume, our international debt burden grows and the pressure is on the dollar to shrink in value compared with other currencies. That means that imports that we are consuming more of are more expensive and exporters get less for the products that they export per unit of volume. Both of those means some belt tightening.

Falling competitiveness is also a really important reason behind the drop in manufacturing employment, which peaked in 1979. Things came to a head for a lot of sectors in the recessions of the early 1980s,

in 1980 and 1982, and many of the jobs that were sacrificed, where manufacturers began the downsizing process and cut costs, have never been replaced. The streamlining and cost cutting that accompanied the recovery of the 1980s were important steps for U.S. manufacturers. That process is not complete. It did cost jobs, it did help in some cases to improve performance, but it is not enough. Cost cutting is not enough. We have to assure competitiveness in manufacturing over the longer term through more than cost cutting, out-sourcing and downsizing.

Other sources of falling manufacturing employment in the last few years, as the other witnesses have pointed out, include the recession, the end of the Cold War and the accompanying cuts in defense, and finally, increased productivity in manufacturing, combined with the recession and the sluggish recovery in the United States; continuing recessions in Europe and Japan have also contributed to shrinking manufacturing employment.

One of the best examples that I can think of comes from the semiconductor industry. There were people who were actually pronouncing it semi-dead in 1986, 1987. We formed Sematech. The industry got a lot of its act together, and there have been some real important improvements in that industry. They have improved their yields, their productivity and their products. Intel is now the biggest maker of semiconductors in the world, and there has been a real resurgence in that industry. Now, that may not be sustainable either, but so far it seems to be continuing fairly well.

Yet, between the worst year for the industry in 1988 and its best year, we have shed over 20,000 jobs. The employment totaled 247,000 workers in the industry in 1988 and only 213,000 in 1993, and that is with a lot of improvement in all the standards by which you would measure competitiveness in the industry.

Now, those workers are better paid than most others in the economy and even better paid than most others in manufacturing, so there are benefits and they do diffuse throughout the economy, but they may not show up in terms of more workers. That is true generally of whatever policies we put in place to improve manufacturing. It may not increase employment, especially in this atmosphere of fiscal restraint and deficient demand.

Policies that improve competitiveness must aim at technology development, diffusion and improved productivity. These, in turn, require that manufacturers have four things: Access to reasonably priced patient capital that allow them the flexibility to make needed investments in workers and technology; second, we need a national effort, not just a company-by-company effort, to improve the quality and proficiency of the work force. We also need a national commitment to diffusion of new technologies, particularly to small- and medium-sized enterprises. And finally, something that we are trying in a new way now, and have done for many decades in the past, is the government can share with the private sector the costs and the risks of research and development

in sectors that make a particularly large contribution to national well-being, to technology intensity and so on that have downstream spillover benefits in other industries.

I will just mention a couple options in each of these four areas. Some measures that could help to reduce the cost and increase the patience of capital might include instituting a graduated schedule of capital gains taxes to reward longer holding of stocks and if you did that, it would have to be extended to pension funds, which accounted for, at least in the 1980s, the greatest turnover.

Continuing progress in reducing the budget deficit would also be helpful, but I suspect I am preaching to the choir when I say that. It is also, of course, impossible to do that and provide fiscal stimulus to the economy.

More specific measures that could help, however, would also include instituting or reinstituting an investment tax credit and revisiting the R&D tax credit to make its coverage broader. There are a few industries that are particularly high-tech right now that don't take advantage of the R&D tax credit because of the way it is calculated.

Measures to improve the work force include training and education to mitigate three kinds of skills deficits: Basic skills deficits in things like reading, writing and simple arithmetic; job or task specific skills; and problem solving and group work. All of these things are needed increasingly by workers as businesses reorganize to compete globally.

We tend to think of technology diffusion in this country as being very rapid and in fact it is, but it is too rapid for a lot of small- and medium-sized enterprises to keep up with. Even learning about new technologies is difficult, not to mention the problems they have adopting and implementing them.

In recent years, we have instituted a few technology extension programs, like the technology reinvestment program that was authorized last year, and that has helped, but there is a lot of room for expansion. We reach very few small businesses in this country with any kind of assistance and information.

And finally, the strategic technology policy is the term that we have loosely coined to describe government sharing the cost and the risk of developing new technologies in critical sectors. We have done this for a long time. It got caricatured in the 1980s as picking winners and losers and that made it unpopular, but we have done it for decades.

We owe some of our dominance—for example, in commercial aviation, medical equipment, pharmaceuticals and agriculture—to decades of government involvement of just that type, through things like NIH, NASA, USDA and NSF.

Recently, we have embarked on a couple of new programs, including the advanced technology program and the expanded use of the national labs for civilian technology development through cooperative research and development agreements, and these are also very promising. They are small, but they are promising.

The clean-car program, which the Administration just announced, is an example of turning the attention of the national labs to problems that confront the civilian economy as they turn their attention away from developing nuclear weapons.

Thank you.

[The prepared statement of Ms. Gorte starts on p. 50 of Submissions for the Record:]

REPRESENTATIVE HAMILTON. Thank you very much, Ms. Gorte.

Let's focus for a few minutes on the basic questions that we set out earlier, just what is happening here in the manufacturing industries.

Let me list a number of factors and ask you to identify what you think the key factors are: Why are we losing all these manufacturing jobs? You have addressed that, but I want to try to sharpen the answers a little bit. Is it because of a lack of adequate education and training of our workers that we are losing to foreign competitors? Is it because our firms are cutting permanent work forces, moving more to temporaries, moving more to part-time, in order to get rid of fringe benefits? Is it the reduction in defense spending? Is labor productivity rising so fast that these firms can produce more output with fewer people? Or is it simply the economy is growing too slowly?

There are a lot of reasons out here. How do you evaluate all of these reasons? What really is important for us to focus on, in terms of the reasons why we are losing these jobs?

MR. BRAVERMAN. Well, I would say that the first and foremost is the economic situation.

REPRESENTATIVE HAMILTON. What does that mean?

MR. BRAVERMAN. I mean, the fact that we are in what, to my way of thinking, is essentially a stagnant economy.

REPRESENTATIVE HAMILTON. So it is just not growing fast enough?

MR. BRAVERMAN. That is correct.

REPRESENTATIVE HAMILTON. That is the fundamental reason, in your view?

MR. BRAVERMAN. Yes.

REPRESENTATIVE HAMILTON. Do the rest of you agree with that?

MR. CARNEVALE. I agree to an extent, but I would point toward what I think is probably an equally important factor—what you characterize as labor productivity; that is, a basic restructuring of the way we produce. I think that is more important than originally supposed. It has shown up over and over again in the past decade.

REPRESENTATIVE HAMILTON. We are getting better at producing?

MR. CARNEVALE. Yes.

MR. BRAVERMAN. I would like to digress a little from that or disagree. I think that some of the improvement in productivity is not meaningful. What it reflects is the layoff of large numbers of workers that were put in place in the 1980s as an insurance policy in case workers were pirated away. So we put in place a lot of extra people who seemed appro-

priate in an inflationary environment in order to protect the firm in case someone superior was laid off or pirated away, more likely. Then there was an understudy who would step into that role.

So, in the effort to become more cost efficient and more competitive in an environment in which we are experiencing deflation, these are the people who can be dispensed with. They are not producing anything. They are not affecting the output. So productivity appears to improve because the number of hours worked obviously changes downward, but the output doesn't. So, yes, the productivity gains are partly due to the purchase of equipment, but it is partly due—and it is difficult for me to assess how much—to the loss of workers who were put in place for an insurance policy in the 1980s, which is no longer appropriate.

MS. GORTE. Manufacturing employment peaked in 1979, and we never got back to the level of the 1970s in the 1980s. There was a lot of worker shedding going on in the 1980s.

For manufacturing, even the recovery from the 1982 recession was a relatively abnormal one, from the standpoint of manufacturing and its work force. This time, we are going to have a blood bath there, starting with production workers and so on.

So, yes, there was a lot of cutting of some of that redundant labor throughout the 1980s, and it continues into the 1990s.

I think some of that is real. Some of the productivity increases that we got as a result are real increases in productivity. We have seen a lot of investment in new methods of making things in some important sectors, like semiconductors and automobiles. You can go in and look at it from the point of view of how many hours does it take to build a car of this type, and that has improved quite a bit. There is now a very, very small margin between the best American producers and the best Japanese producers in automobiles, for example, and semiconductors.

So there have been some real improvements in productivity, and combined with stagnant demand, not just here, but in Europe and in Japan and in Canada where we export a lot of stuff, that made it very difficult.

We still have competitiveness problems too, and we shouldn't forget that. When I said there are a few sectors that have staged a modest comeback, few and modest are the key words in that. There are some sectors that still face some of the reorganization that they need in order to become more competitive with international rivals.

REPRESENTATIVE HAMILTON. Let's assume that you don't have much of a change in government fiscal or monetary policy, for a moment, over the next few years. Let's assume the government doesn't do anything with regard to industrial policy. In other words, you have a continuation of current policies. The outlook is pretty bleak for manufacturing jobs, isn't it?

MR. BRAVERMAN. Yes.

MS. GORTE. Yes, I think so.

REPRESENTATIVE HAMILTON. Really bleak, right? In other words, we have a real crunch here. We have to make some changes if we are going to create good manufacturing jobs, and you have been identifying those changes for us, but all three of you agree with respect to that?

MR. CARNEVALE. One somewhat minor footnote to that, and that is, manufacturers are hiring. We should keep that in mind. Although overall volumes of hiring are down, there are substitutions occurring, and where the hiring occurs, what one tends to see on the factory floor is the substitution of technicians for the factory flow work team. The materials handler, the machine operator, the skill trades workers, the electrician, and so on, are being substituted for, I think, in old line manufacturing, about one for three by technicians. In new start ups, you can do one to four or one to five, frankly.

REPRESENTATIVE HAMILTON. Let's talk a little bit about the competitive aspect of it. Now, is U.S. manufacturing able to effectively compete in the world today?

MS. GORTE. Some sectors compete effectively in the world today, but today doesn't necessarily mean tomorrow. We are still not investing as much as Japanese rivals, and let's face it, it is my opinion that the Japanese are far and away our most formidable competitors in the world in most sectors, in terms of capital equipment, in terms of worker training, and in some cases, in terms of R&D as well.

R&D has been stagnant in real terms in the United States since 1988. We are living off a legacy of past R&D just in terms of volume, and also it has become more short-term focused.

So, at some point, we are going to start seeing deficiencies in technologies that are ready for implementation in, say, five years. We are concentrating evermore on things that can be deployed in two years. So, yes, today, there are some sectors where manufacturers are competing much better than they were five years ago. Autos and semiconductors are examples.

REPRESENTATIVE HAMILTON. Is the decline of manufacturing jobs, in your view, more related to foreign competition or to domestic economic problems and policies?

MS. GORTE. I don't think I could untangle that plate of spaghetti. I think they are intertwined in ways that are organically inseparable.

REPRESENTATIVE HAMILTON. You wouldn't weigh one more than the other?

MS. GORTE. That is right.

MR. CARNEVALE. I would say that American manufacturing is competitive to the extent that it does install new flexible technology, new flexible work formats and restructures work forces so that they use fewer but more highly skilled workers, and that process is largely driven by foreign competition, especially technological change forced by international competition.

REPRESENTATIVE HAMILTON. If you talk to workers out here, the thing they blame the loss of their jobs on is the fact that we are losing jobs to foreign workers who are working for less wages.

MS. GORTE. That is true.

REPRESENTATIVE HAMILTON. Do they have it figured right or wrong?

MS. GORTE. Some of them have it figured absolutely right.

REPRESENTATIVE HAMILTON. Depends on the industry?

MS. GORTE. That is right, exactly. The Japanese auto worker is not paid less than the American auto worker. In fact, it now costs more to produce a car in Japan than it does in the United States. We are losing jobs to them because they do it better and they design better cars, or we did.

However, in things like textiles and apparel, parts of things, sometimes in aircraft, yes, we are definitely losing jobs to workers that are paid less.

REPRESENTATIVE HAMILTON. Go ahead.

MR. BRAVERMAN. I think one thing should be mentioned, that nothing is static. In Japan, they have lost industries.

REPRESENTATIVE HAMILTON. Are they losing manufacturing jobs?

MR. BRAVERMAN. Yes, in low-tech industries. They had a shipbuilding industry and they decided that it wasn't efficient. That moved to Korea. Low-tech or industries where they are not able to compete, they lose jobs as well. We obviously are going to be losing jobs if we manufacture things that can be manufactured far more cheaply in countries that have lower wage standards, that are able to pollute, where the health standards are not as high. So we are not playing on a level playing field because the whole world does not share our standards of living. That is obvious. So we cannot in any way, shape or form, hold back that change.

What we can do is identify those areas where we could compete far better, where we could have innate advantages. Those are the areas where there are opportunities for the future, and I think they are essentially high-tech areas, areas of fashion—whether they are in the entertainment field or in services—that cannot be duplicated elsewhere.

REPRESENTATIVE HAMILTON. Do you feel generally that our education system is failing to provide the basic skills needed for many manufacturing jobs?

MR. BRAVERMAN. Definitely.

REPRESENTATIVE HAMILTON. All of you feel that way?

MR. BRAVERMAN. I think one area that we can learn from—there are many areas, but one in particular, and this is relevant here—is that the Japanese try to create manufacturing by team efforts, that individuals must have the flexibility to do a number of different jobs on the manufacturing floor.

REPRESENTATIVE HAMILTON. So it is not just a matter of basic education; it is, we don't train our workers enough; is that also the case?

MR. BRAVERMAN. Yes. It is clear that at lower levels of education, the fundamentals, the estimates are that up to perhaps 50 percent of our potential labor force is functionally illiterate.

REPRESENTATIVE HAMILTON. Why do you think the American manufacturer tends to invest too little to upgrade skills?

MR. CARNEVALE. It depends on the industry and size—technology intensive industries don't underinvest and large companies, generally, don't either, I would argue.

REPRESENTATIVE HAMILTON. Do not?

MR. CARNEVALE. Do not. That is, large companies in America invest, in total, about $30 billion a year in skill training. More than half of that goes to the technical training of nonsupervisory workers.

Where one sees difficulty here is in mid-sized and small manufacturers, of which there are about 360,000 under 500 employees. There the problem is, first of all, pirating; that is, you train, I will raise wages and hire who you train; and second, the inability to achieve the advantages of scale that will allow them to afford and operate training programs efficiently.

REPRESENTATIVE HAMILTON. I am not clear on your testimony. You said that the big companies are doing enough skill training?

MR. CARNEVALE. Yes.

REPRESENTATIVE HAMILTON. They are doing it across the board among their employees, not just the executives?

MR. CARNEVALE. Yes. The most highly trained worker in companies that do have training systems is the technician, or the skilled trades worker, in terms of the overall proportions.

REPRESENTATIVE HAMILTON. But the smaller companies tend not to train their people enough; is that right?

MR. CARNEVALE. And in manufacturing, that set of smaller institutions is growing in number and in the proportion of output they comprise and certainly in the number of workers they hire. That is, we are shifting towards mid-sized manufacturers as the core of our manufacturing industry now.

REPRESENTATIVE HAMILTON. How about the problem of regulation? I think you may have mentioned this, Mr. Braverman, in your comments. Is the fact that American manufacturing has too many regulations on health and safety and environment and all of that, and it cuts their productivity and jobs in the end; is that the case?

MR. BRAVERMAN. Yes, I would think so. It becomes burdensome and onerous.

REPRESENTATIVE HAMILTON. You sure hear that from the manufacturers today. They complain a lot about regulations. You agree with that?

MS. GORTE. I think I would make it a little more complex than just, yes, more regulation means higher costs. There are also very highly regulated industries in Europe and Japan that do quite well competitively.

What you tend to see there is that you see government programs that enable manufacturers to know what the regulations are and to comply, and sometimes to get lower, no interest loans in order to afford the compliance equipment and the training that is needed.

What we need is a less adversarial system of regulation, not necessarily less regulation.

REPRESENTATIVE HAMILTON. That is interesting. Their regulations are just as tough as ours, but they subsidize the workers more in some way, is that it?

MS. GORTE. Yes. I don't think I could make an across the board, yes, their regulations are tougher, but there are some industries where they are and some where they are not, and some of the industries where they have to have regulations, they are quite competitive.

REPRESENTATIVE HAMILTON. What is the impact in all of this—manufacturing jobs—of the public infrastructure? Do you think that the major reason we are not doing as well in keeping manufacturing jobs is that we have not kept up the public infrastructure?

MR. BRAVERMAN. I think that is an element, yes.

MR. CARNEVALE. If one looks toward the industries of the future, one supposes that the public infrastructure necessary to sustain them and encourage demand for the manufacturing products that they would make—for example, high density TV—is generally not available here and more available elsewhere. One also hopes that they are the industries that we will substitute for defense production over time. Really, one hopes that those are the industries that will provide the kind of volume of employment that we got from rubber and steel and auto in the old manufacturing world.

REPRESENTATIVE HAMILTON. How serious are the transportation problems in the question of productivity? Come into Washington and the Southwest Freeway any morning, you are stacked up for a long time. You sit on the runway for an hour, not unusual to those of us who fly a lot.

You sit in the traffic line for an-hour-and-a-half to get to work, when it should take you 15 or 20 minutes. I mean, are these matters that are serious or not?

MS. GORTE. I think that is of a secondary importance.

REPRESENTATIVE HAMILTON. It doesn't matter if all those people are sitting out there on the highway?

MS. GORTE. Of course it matters. I don't like sitting there anymore than you do on the Southwest Freeway. I was thinking of all the other things that I could do with my time this morning.

But comparatively speaking, our airports function about 500,000 percent better than Narita in Japan. There are road problems and phone problems and so forth in Mexico, and yet some manufacturers have learned to do just fine coping with a very inferior infrastructure down there.

It is important. If we improve those things, it would help. Is it of first order of importance? No.

REPRESENTATIVE HAMILTON. You don't put it at first order of importance?

MS. GORTE. No, I don't.

REPRESENTATIVE HAMILTON. Let me just go back to a question about the importance of manufacturing jobs in the American economy. How do you express that? Ms. Gorte, you had some things on that in your testimony. I mean, is this really something we ought to worry about, the loss of manufacturing jobs?

MS. GORTE. There is no such thing as an industrialized country that sustains healthy living standards and doesn't have a healthy manufacturing sector.

REPRESENTATIVE HAMILTON. So it is a very, very important matter to focus on?

MS. GORTE. That is right. If I were doing the policymaking—which I am not, so I can preach all I want—I would focus not on increasing jobs, but on increasing productivity, quality and efficiency. And if you do that, you might not have more jobs, but the jobs you do have will be better paid, better skilled, and the benefits will diffuse widely throughout the economy.

If you just focus on increasing jobs, I think you might end up with some——

REPRESENTATIVE HAMILTON. You really get the reverse of that when you talk to a lot of people. I notice this again and again. They think the best thing to do is to protect the jobs—you know, they are very worried about this—even if it means that you are not moving to the highest technology and the highest productivity; protect the jobs is the main thing. It is the reverse of what you said.

MS. GORTE. I think, if it were my job and I lived in the middle of America, that is what I would want too.

REPRESENTATIVE HAMILTON. How about if you lived on the East Coast? Same thing, isn't it?

MS. GORTE. It is one thing when you are talking for yourself personally. It is quite another when you are trying to figure out what to do, what the best thing for the Nation is.

REPRESENTATIVE HAMILTON. Let's pick up that idea. Do you agree with that? In other words, you don't focus on creating manufacturing jobs; you focus on productivity and so forth.

MR. CARNEVALE. I think the bottom line is that manufacturing leverages everything else. Some people say one job for four. In most cases, two of those jobs, even three, are outside manufacturing. And so the bottom line is that manufacturing output and market share creates jobs both in manufacturing and elsewhere.

Having said that, it seems to me that we don't want to become apologists for this modernization process which will inevitably, I think, reduce jobs relative to output in manufacturing itself.

REPRESENTATIVE HAMILTON. If you take the total number of jobs in America today, what percentage of them are manufacturing?

MR. CARNEVALE. Seventeen percent.

MS. GORTE. About 15 percent.

REPRESENTATIVE HAMILTON. Historically, how would that run?

MS. GORTE. It used to be up above 20 percent. Most advanced industrial nations have had shrinkages in terms of their share.

REPRESENTATIVE HAMILTON. We have about 15 percent?

MS. GORTE. We have about 15 percent; Japan has 20 something; Germany has 20 something.

REPRESENTATIVE HAMILTON. So we are a little lower than the other industrial countries?

MS. GORTE. That is right.

REPRESENTATIVE HAMILTON. These are the best paying jobs in the country, as a rule, in terms of the workers?

MS. GORTE. As a generalization, yes. There are a few service sectors where wages are actually higher than manufacturing average, but not many, and they tend to be really small.

REPRESENTATIVE HAMILTON. In general, services pays less than manufacturing?

MS. GORTE. That is right, and they tend to have more part-time workers and fewer benefits.

REPRESENTATIVE HAMILTON. Okay, let's get into what we ought to do about it now. Most of you seemed to be fairly receptive to the idea of industrial policy broadly defined, right?

MR. BRAVERMAN. Yes.

REPRESENTATIVE HAMILTON. And it is even necessary to get us out of this stagnation or, as you said, disguised depression, I think was the word you used, Mr. Braverman.

I would like to get your quick reaction to the announcements made the other day on export strategy, the automobile program, the export controls on computers, the shipbuilding program and so forth. Those are, I guess, fairly modest steps taken one-by-one, but they do suggest some kind of a shift in economic policy. How did you react to all of that?

MR. BRAVERMAN. I reacted very favorably. It seemed to me that we are taking some steps to deal effectively with areas where we have lost some ground or there are opportunities. We were taking some leadership, and perhaps some would accuse us of being a little aggressive, but I think in a competitive world environment it helps us in our negotiations.

REPRESENTATIVE HAMILTON. Do you think we ought to be helping the automobile companies find more energy efficient automobile?

MR. CARNEVALE. Yes.

REPRESENTATIVE HAMILTON. Why pick the automobile business? I mean, why not pick 150 other industries to help?

MS. GORTE. That is the $64,000 question, how you prioritize among the sectors. At this point, it is just kind of throwing darts. People are looking out there and saying, hey, this has a lot of value added——

REPRESENTATIVE HAMILTON. It is more than that. It is political clout, isn't it?

MS. GORTE. Well, I am being polite. But, yes. I mean, we need a more effective system for choosing.

REPRESENTATIVE HAMILTON. Automobiles are a pretty big symbol, aren't they, of the whole manufacturing, business?

MS. GORTE. It is not just symbolic and it is not just political. There are a lot of workers involved. It is still one of the biggest manufacturing sectors in the United States, and it tends to drive a lot of other upstream industries, like the developers of batteries and electronics and materials and so forth that go into autos, and are among the highest tech of the small and medium-sized enterprises in America.

REPRESENTATIVE HAMILTON. Take the shipbuilding industry now. We can pump an awful lot of money into shipbuilding and not be competitive, right?

MS. GORTE. Right.

REPRESENTATIVE HAMILTON. Should we do it?

MS. GORTE. I doubt it.

MR. CARNEVALE. I would offer a somewhat subtle, but I think important, distinction between industrial policy and technology-based policies. That is, to the extent we are trying to build a new car, we are engaged in technology policy as much as industrial policy.

What is nice about technology policies is that one hopes they attach to the industries of the future, and they are the devices by which one modernizes current industry without giving as much access in political terms to special pleaders and more organized industries.

REPRESENTATIVE HAMILTON. You would like to see the government participation more on the higher tech end of things; is that right?

MR. CARNEVALE. Technology, in general, I think, becomes an agent of modernization in existing industry, and it would point towards, albeit in a gambler's way, to industries of the future.

REPRESENTATIVE HAMILTON. You talked about exports being very important, so the move to relax some of the restrictions on the sale of computers and super computers meets with your approval, I presume; is that right?

MR. CARNEVALE. Yes.

REPRESENTATIVE HAMILTON. That is a step in the right direction?

MR. BRAVERMAN. Yes. In my testimony, I emphasize the importance of high technology as well. I think that is where the future lies, not only in terms of the jobs, but in the products and in the forefront of research, it is important to remain a participant.

I think that is where the growth and the good jobs will be. In dealing with the automobile industry, the emphasis is a little more far-reaching. I think, when there are consequences for the economy in general, we want to move in that direction.

If we become less energy dependent on overseas sources of energy because our cars get more miles to the gallon, that is certainly an advantage, not only in terms of jobs, but in terms of the extent to which we import oil.

If we were to focus, for example, on energy savings, we could reduce almost half of the energy consumed through household electricity used by refrigerators in the United States. If we were able to focus on something as mundane as that to get a little more efficient——

REPRESENTATIVE HAMILTON. Half of the energy?

MR. BRAVERMAN. Close to half the electricity is consumed by refrigerators. If we were able to develop a more energy efficient refrigerator, now, that may sound like it is not a particularly important area for growing manufacturing jobs, but there are consequences for that.

REPRESENTATIVE HAMILTON. You think the government ought to get into that?

MR. BRAVERMAN. I think there should be a partnership between government and private enterprise to see what the restrictions or barriers are to promoting research and development, and that is where the partnership lies.

If you want to do something in this instance, it may not be an advantage for manufacturing jobs, but it may be in a broader sense an improvement in the economy of the United States.

REPRESENTATIVE HAMILTON. Now, your first recommendation, as I recall from your testimony, was to have the Fed ease up, and I want to be clear about that. Easing by the Fed would be the most important, or among the most important, steps that could be taken by the government to help create manufacturing jobs; is that your view?

MR. BRAVERMAN. Yes, I believe that, but not merely in terms of lowering interest rates—which I am in favor of—but promoting a growth of credit and growth of credit to small and medium-sized businesses so that they can use it for expansion.

REPRESENTATIVE HAMILTON. Ms. Gorte, Mr. Carnevale, you agree with that? Is that among the most important thing to be done?

MR. CARNEVALE. It is, but again, with the proviso that, to the extent we provide credit, to the extent we expand demand, we accelerate modernization, and modernization sheds low skilled labor. That is the rider that comes with all of this.

REPRESENTATIVE HAMILTON. So you would do it anyway?

MR. CARNEVALE. Yes.

MS. GORTE. I put the four things as being equal. I don't think there is one thing that is a silver bullet. I don't think just an expansion of credit would be——

REPRESENTATIVE HAMILTON. I understand that. Other things have to be part of it, yes. What are the other things?

MS. GORTE. Besides providing capital, you mean?

REPRESENTATIVE HAMILTON. Let's stay with the macroeconomic policy. The Fed has to loosen, but how about on the fiscal side of policy? Do you think that you need to take any steps where you have these big deficits, of course? I mean, does that bother you? How does fiscal policy play into the question of manufacturing jobs?

MR. CARNEVALE. It is the distribution of the spending in the end that matters there. Without much wiggle room in terms of the overall level of spending—to pull that lever and expand, it seems to me that the one thing you can do is to target the spending somewhat.

One thing you can do that is very cheap in that regard, which we are doing to some extent, is to provide some sort of industrial extension and modernization service to those 360,000 mid-sized manufacturing firms. It is relatively cheap and gives a fair amount of bang for the buck.

But in terms of stimulating overall demand, absent defense and increased spending in other technology and manufacturing intensive line items in the budget, that is about all you can do.

REPRESENTATIVE HAMILTON. How much are you going to tell Mr. Greenspan to loosen up on the Fed? Got any measures for me?

MR. BRAVERMAN. Well, it seems to me that we ought to be getting credit growth, at a minimum, what we have experienced in past recessions. In other words, 3 percent private-sector growth in credit is half the 6 percent that we normally get in recession, and one-third the 9 percent rate of private-sector credit growth that we get in a recovery. I think one can attribute a good deal of the slowdown in the U.S. potential growth to this deficiency in credit expansion.

As far as interest rates are concerned, I think there is plenty of room for the Fed to lower rates, just as there was plenty of room in Japan to lower rates beyond the levels that they had previously moved.

REPRESENTATIVE HAMILTON. Without inflationary consequences?

MR. BRAVERMAN. Without inflationary consequences.

REPRESENTATIVE HAMILTON. You are not much worried about inflation?

MR. BRAVERMAN. No, not in this environment.

REPRESENTATIVE HAMILTON. What is the inflation rate today?

MR. BRAVERMAN. In the last four months, it was 1.5 percent.

REPRESENTATIVE HAMILTON. Give me an annual figure.

MR. BRAVERMAN. It was in the area of 2.8 percent, but I would point out that Governor Lindsay, in a recent speech, indicated that an inter-

nal Fed study had discovered that between 1 and 1.5 percent of the inflation rate was inaccurate due to quality changes that had not been taken out of the CPI.

REPRESENTATIVE HAMILTON. So it is even less than 2.8 percent.

MR. BRAVERMAN. It is really in the neighborhood of probably half that.

REPRESENTATIVE HAMILTON. You don't worry about inflation, Ms. Gorte, Mr. Carnevale?

MS. GORTE. Not at this point I don't, no.

REPRESENTATIVE HAMILTON. Okay, let me ask whether businesses are substituting temporary for permanent workers. Is that happening? Is that a major trend that is going on now? On an anecdotal basis, you get the sense that this is happening. When I talk with my constituents, I hear this complaint constantly.

MS. GORTE. Yes, that is happening. It has been happening for a decade. There has been part-time for full-time substitution, and there has been some temporary for permanent substitution as businesses find ways of cutting fixed costs, much of which happened in the 1980s.

It is still happening, and you also see some spinning off of things that used to be integral to manufacturing. A lot of them are relying on outside business services providers to do things like payroll, finance, some of the finance and so forth that they used to do internally.

So you are seeing some growth in service sectors as a consequence of spin-offs from manufacturers.

REPRESENTATIVE HAMILTON. You have a growing number of part-time workers, but it is also true, isn't it, that the percentage of the working age population with a full-time job is higher today than it was in the 1960s and 1970s; is that correct?

MR. CARNEVALE. Yes, and these forces are less important, I would argue, in manufacturing than they are elsewhere. That is, in manufacturing, what one sees more of is what Ms. Gorte referred to, and that is, using smaller external institutions where labor tends to be cheaper, using suppliers and external service suppliers rather than using part-time workers.

REPRESENTATIVE HAMILTON. You have rapid growth of employment in the personnel supply services industry. That is the category we are talking about here, I guess, from an economist's standpoint, right? And that has had a rapid growth. Should we worry about that?

MS. GORTE. Part-time and temporary workers tend to have less benefits. I think it is one of the things that is probably driving up health care costs and making a lot of Americans that can't afford it at all less healthy or less protected. So, yes, just from a social standpoint alone.

REPRESENTATIVE HAMILTON. Part of the cost shifting that goes on?

MS. GORTE. Sure.

MR. BRAVERMAN. I think this is a process that business is engaging in in order to minimize or reduce its costs. So, by shifting to part-time

workers, temporary workers, contract workers, self-employed individuals, they are trying to shift away from the expenses, the fringe benefits of health care, and turn to less expensive workers, and that, I think, is part of the entire process deflation that I had addressed.

REPRESENTATIVE HAMILTON. When we talk about solutions to strengthen manufacturing and to make the United States more competitive, we usually talk, as we have done this morning, about improving education, improving training, better job training, more research and development, and all of those things. All of that costs a lot of money, and are those really realistic recommendations today, given the kind of a fiscal climate we have?

MR. CARNEVALE. Let me just offer one view, and that is, to the extent this modernization process occurs and to the extent it creates technician level jobs in manufacturing and more jobs in professional and service functions in manufacturing, which it seems to do, individuals as well as state governments, apart from the Federal Government, seem quite willing to come forward when the jobs are available to pay their share of the education and training cost. That is, the demand is generally the issue. If you are a governor and you have a plant that locates and needs 300 to 400 technicians, you are more than willing to step up, as are junior colleges and vo-tech systems, to provide those people.

The usual issue is for the governor to get the plant to locate there in the first place. I think, with demand in place, both individuals and other governments—state governments principally—are perfectly willing to pay a lot of the human resources costs.

I don't think we have a huge shortfall in resources for education and training, in terms of our ability to produce the technical work force that is required in manufacturing. The issue is the extent of demand and matching the growth in demand for technical workers against the supply. The supply institutions, including employers, are more than willing to see demand increase for their product and to respond to that.

MS. GORTE. All of the stuff that we are talking about costs money. Not all of it is government money. Some of it is something that you can oblige or incentivize, if I can use that word, which I hate, the private sector to do, but it is, in a sense, not an option.

If we lay the foundations for improved competitiveness and performance in the future, we will get ourselves on a path of becoming richer. If we say, we don't have any money, we can't afford to do all this stuff, and we don't make those investments in new equipment, in workers, in human beings, and in technology diffusion and so forth, then we are going to stay on this path of stagnation, as far as I can tell, for just about forever.

So, yes, it is going to be belt tightening in the short run, but poor nations have gotten themselves onto faster growth paths in the past by being willing to forego some current consumption in order to make investments in future productivity.

MR. BRAVERMAN. It is my view that when a patient is in the intensive care ward, it is not the time to complain that he is overweight and ought to go on a diet and have physical exercise.

As far as the economy is concerned, we are now in the intensive care ward, and this is not the time, in my view, for fiscal restraint. It is the time for fiscal stimulus. There will be time in the future when the economy is in better health when we can address the budget deficit. Japan, for example, is utilizing fiscal stimulus, and indirectly so is Germany, as well as monetary stimulus.

They are dealing with the problems that they have. We are not in much better shape than they, if at all, and it seems to me that the problems we are confronted with require similar initiatives. If they are costly, presumably that cost will be more than offset by the improvement in the U.S. economy and that will raise revenues.

Raising taxes will not get you the revenues. We are, in effect, dealing with a problem that is a long-term problem, the budget deficit, which we cannot address merely by attempting to raise taxes that will only attempt effectively to reduce the economic performance of the country.

REPRESENTATIVE HAMILTON. Should we cut taxes?

MR. BRAVERMAN. Yes, definitely. This is a time to be pursuing a stimulative policy of raising spending.

REPRESENTATIVE HAMILTON. Raise spending, cut taxes, let it rip on the deficit?

MR. BRAVERMAN. For a period of time until the economy improves. If we have a commitment to deal with the budget deficit at that time when the economy improves, that, I think, will deal effectively with the budget deficit at the appropriate time.

REPRESENTATIVE HAMILTON. That sounds a lot like what we did in the 1980s, doesn't it?

MR. BRAVERMAN. No, because in the 1980s, as soon as the economy showed strength, we cut taxes at a time when it was not appropriate. We have used the wrong methods and the wrong solutions for the times. The economy was in fine shape through most of the 1980s.

REPRESENTATIVE HAMILTON. Mr. Carnevale, you agree with that, cut taxes, increase spending?

MR. CARNEVALE. I think we are committed to a path of deficit reduction and I think we ought to be. I think the issue is——

REPRESENTATIVE HAMILTON. Why, if you need more demand?

MR. CARNEVALE. There is the rub. I think, in the end, what we can do, the best we can do, in the short haul, is to try and target what spending we do commit to in fiscal policy. That is, to the extent that we let the deficit rip, my guess is that most of the money that was spent would be consumed, not invested.

REPRESENTATIVE HAMILTON. On the consumption side.

MR. CARNEVALE. On the consumption side, and to the extent we are going to add spending, I would be fairly aggressive in recommending to

you that the spending be investment oriented, and frankly, my bias would be that that investment spending be targeted both on technology and the human resources.

REPRESENTATIVE HAMILTON. Human resources means training, education, health care?

MR. CARNEVALE. For me, more training and education than health care, because I think a fairly substantial portion of health care is consumed, although spending in health care drives an industry that is very technology intensive, and produces high-skill, high-wage jobs.

To some extent, our commitment to spend on health care is a fairly sound competitive instinct. The manufacturing component in health care consumption is also fairly substantial. But my bias would be to focus the spending on technology and to focus it on education and training.

REPRESENTATIVE HAMILTON. How about your bias, Ms. Gorte?

MS. GORTE. You are getting me out of the area of my expertise, but speaking as a somewhat well informed citizen——

REPRESENTATIVE HAMILTON. Don't worry about that.

MS. GORTE. ——I am not really inclined to cut taxes, no. I don't think I would let the deficit rip to that extent, and I know there is not enough room in the spending cutting to finance all these things that we are talking about.

We are talking about tens of billions, maybe even one hundred or more billion dollars, if we reinstituted a broad investment tax credit in terms of a drain on revenue alone, and that is just one program.

So, no, I am not quite sure that I would be that careless of the deficit rearing its ugly head again.

REPRESENTATIVE HAMILTON. Let me ask you a question. It comes from an area that I represent. We have a lot of manufacturing in rural areas, and my general impression is that the manufacturing in rural areas tends to be smaller in size and less technological, perhaps, in its processes.

Now, they are under a lot of pressure, I guess, from the kinds of testimony you have given here today. They are doing the kind of manufacturing that you think is not going to have a bright future, I presume, in general.

MS. GORTE. There is always going to be a role for suppliers to large manufacturers. In the heart of the Mid-West, people that supply the parts for cars and airplanes and refrigerators and so forth, I don't see that disappearing.

Their future can be as bright as we want to make it. They need access to technology. They need access to the means to implement that technology. They need access to the means to invest in workers. Most of the people who own those businesses are more than willing to make those investments if they can get decent information on what they are and what their options are, and if they have some help in making the investment. Right now, they are getting nothing. They are getting noth-

ing from banks, they are not getting very much from government, and not very much from extensions.

REPRESENTATIVE HAMILTON. The best kind of thing, when you talk about getting help, what do you have in your mind?

MS. GORTE. Credit and access to really well-informed assistance in terms of making the choices, like industrial extension services. You authorized one last year. Part of the technology reinvestment program is to help small- and medium-sized manufacturers to upgrade their operations and switch lines of businesses. That kind of information is absolutely invaluable.

MR. CARNEVALE. I would hope that the smaller manufacturers in your state are going to get either a manufacturing technology center or a manufacturing outreach center, a smaller version of the MTC to help them.

One of the things to keep in mind is that what one sees in those modernization processes among small manufacturers is that the five-person machine shop ends up disappearing in favor of smaller supplier institutions at around 25 employees per operation, so there is a process of recombination that occurs among the smaller institutions as well.

REPRESENTATIVE HAMILTON. Now, let me ask you the question, this loss of manufacturing jobs, it is not just a U.S. concern, is it? It is a concern across the industrialized world?

MS. GORTE. Go to Europe and listen to them sometime.

REPRESENTATIVE HAMILTON. The President has a meeting coming up with the G-7 countries. Anything you think can come out of that?

MR. CARNEVALE. Sure.

REPRESENTATIVE HAMILTON. What?

MR. CARNEVALE. It seems to me that when we play this checkers game about how we are going to expand demand, the corner we end up in is exports. That is the way we can expand demand, at least politically and in terms of the set of current policies. And if there is a way for us in those meetings to leverage American exports and at the same time increase global demand by coordinating economic policies, that seems to me to be the ideal outcome of a meeting of that kind.

REPRESENTATIVE HAMILTON. Okay. Congressman Ramstad wanted to submit an opening statement for the record, and that will be done without objection.

[The written opening statement of Representative Ramstad starts on p. 56 of Submissions for the Record:]

REPRESENTATIVE HAMILTON. Do you have any further comments that you want to make before we conclude?

I thank you very much for your testimony. You don't exactly fill me with optimism, but you have given us some good suggestions.

We appreciate your time and the testimony has been good. Thank you, we stand adjourned.

[Whereupon, at 11:30 a.m., the Committee adjourned, subject to the call of the Chair.]

SUBMISSIONS FOR THE RECORD

PREPARED STATEMENT OF PHILIP BRAVERMAN

Mr. Chairman, it is a privilege to be here today to present my views on the future of manufacturing and manufacturing jobs in the United States.

The purpose established for these hearings is to examine the causes and consequences of the decline in manufacturing and consider possible policy options.

Of the four main issues to be addressed, I would like to deal first with the questions of what explains the 1.8 million loss of manufacturing jobs since January 1989. Is U.S. manufacturing able to compete effectively in the world economy? And has the decline in manufacturing jobs been due to competition or domestic economic problems and policies?

What is currently happening to manufacturing is to a considerable extent a reflection of what is happening to the broader U.S. and global economies. These problems were largely created and exacerbated by perverse governmental, regulatory and central bank policies.

The credit crunch is a major depressant on the U.S. and global economy. The rates of credit growth in nominal and real terms have been closely associated with GDP growth this century. But debt growth has been decelerating rapidly from the late 1980's on. Whether we look at total nonfinancial debt, including Federal government debt, or private debt which excludes Federal debt, the rates of debt growth have recently been the slowest ever recorded. In the first quarter this year, for example, total nonfinancial debt grew at a 4.6% seasonally adjusted annual rate (about in line with growth rates since the fourth quarter of 1990), but one-third the pace in 1985. Private sector borrowing grew at a 3% seasonally adjusted annual rate in the first quarter (similarly in line with the growth rates since the fourth quarter of 1990). But this is only about half the typical borrowing and lending pace in recession, and roughly one-third the pace typical of past recoveries.

It is especially significant that bank lending to business remains dead-in-the-water. Over the past year, business loans at large weekly reporting banks are down 3% from the beginning of September a year ago and down 5% from the beginning of December 1992. Indeed, while there had been a flickering appearance of a pickup in bank lending to business this spring, since mid-year borrowing is again down, and at a 5% seasonally adjusted annual rate. This deficiency in bank lending is a critical cause of economic weakness. While major firms typically have direct access to the credit markets (even including junk bond financing for poor credits), small and medium sized firms rely principally on banks for their credit. Though some very small businesses have been able to finance themselves through home equity loans, that is not a sufficient source of capital growth. Because these firms are the fastest growing, their need for business credit is crucial to their expansion. And their expansion is crucial to the economy's growth because that is where the bulk of added investment and hiring usually comes from in the early stages of recovery. This is a large part of the reason why economic prospects are so grim.

The absence of faster credit growth is not merely a reflection of a history of bad lending practices of the past or an insufficiency of the demand for new credit. The U.S. is experiencing a major credit crunch appropriate for a period of intense inflation, not for a period of disinflation with growing elements of deflation. Even more significant, the severity of this credit crunch is a direct

consequence of the cyclically perverse policies of the regulatory authorities. These perverse policies include excessive examiner vigilance and oversight of bank lending practices, to the point of stifling lending initiative. Also cyclically perverse is the increase in bank capital requirements under the BIS rules, which also act to constrain bank lending.

The absence of any meaningful bank lending to business, and the slowest private sector credit growth ever recorded, makes a mockery of the Federal Reserve's pretensions to have engineered an accommodative money and credit policy. Judging by results, the Fed's policy has been tight fisted and restrictive, certainly not accommodative and stimulative as it pretends to be, or as it should now be. Low interest rates are not stimulative if the credit is not available. Indeed, low interest rates are in themselves restrictive. Unless offset by the stimulative effect of increased spending and investment, low interest rates reduce consumer interest earnings, which are now threatening to decline below consumer interest payments.

In the year immediately ahead there are additional uncertainties confronting U.S. business and manufacturing. Uncertainty hinders business decision making and long-term planning. And there is tremendous uncertainty currently over the consequences of recent and coming governmental initiatives. These sources of uncertainty include the budget deficit reduction package of tax increases and spending cuts, the defense cutbacks, the military base closings, NAFTA, the health care proposals and the funding of underfunded corporate pension obligations. Business recognizes all too well that tax increases and spending reductions are examples of fiscal restraint not fiscal stimulus. Gyrating foreign exchange rates and fast moving developments in Eastern Europe are also major obstacles to decision making and long-term planning. The consequent heightening of business uncertainty is already taking its toll on business confidence, capital investment and hiring intentions.

The recent deterioration in business confidence and increasing business caution (that stems from fiscal restraint, the threat of new tax and other uncertain governmental initiatives) is evident in a broad spectrum of business surveys.

The Cahners Economics survey joins a Conference Board survey, one by management consultant A.T. Kearney Incorporated, as well as recent surveys by the American Management Association and National Federation of Independent Business in pointing to declining business confidence and declining hiring intentions, even among small business. Of the chief executives polled in the Conference Board's late third quarter survey, only 29% expect an economic pickup 6-months from now, versus 50% with an optimistic view at the end of the second quarter. The Conference Board executives reported 30% were revising their capital spending plans downward, a significant worsening from the 22% who reported plans to reduce capital investment in the survey conducted a year ago. Even more ominous, the Kearney survey indicated that year-over-year increases in capital investment spending would be 2% in the fourth quarter, a precipitous cutback from the 11% year-over-year increase reported for the third quarter.

The prospect of renewed weakness in capital investment has adverse implications for manufacturing employment, research and development and U.S. manufacturing's future competitive position. Non-residential fixed investment, including both structures and producer's durable equipment, topped out in 1989 and declined in the 1990-91 recession years. Investment in producers' durable equipment topped out in 1990 and declined in only 1991. Through the second quarter, fixed investment in producers' durable equipment was

rising vigorously, reaching $41.6 billion, up a striking $49.9 billion or 12.7% from the second quarter of 1992. However, three-fifths of this increase over the last four quarters was in two questionable categories. The first was a $14.2 billion increase in investment in computers and other information processing equipment (boosted partly due to distress sales). The second category is a $15.1 billion increase in transportation and related equipment, much of which reflects the investment of automobile manufacturing leasing companies in cars leased to consumers as a means of bolstering car sales. This latter category, in particular, is not the investment in productive capital equipment, such as machine tools or in more efficient processes or research development that holds the promise of limiting the erosion in U.S. manufacturing.

The United States and the industrialized world are in the midst of an extended period of stagnant economic growth which is accelerating the downtrend in U.S. manufacturing employment. Much of the rest of the world is currently in the grip of a protracted recession (which undercuts the demand for exports). The United States is in the midst of an exceedingly sluggish recovery that, at best, is likely to persist through next year. But at worst, the United States could fall back into recession next year. Even if a recession is avoided next year, the outlook is for frequent extended periods of economic stagnation for most or all of the rest of this decade. This reality suggests that the downtrend of manufacturing employment will persist and perhaps accelerate, unless appropriate governmental action is taken. But other forces are at work that darken the U.S. manufacturing employment picture still further.

Most economic observers view this current period as just another typical business cycle that just happens to be more sluggish than its predecessors. However, this is not just another business cycle. The difference between past cycles and the current situation goes far beyond merely a matter of slower than typical rates of economic growth. The U.S. and global economy are confronted by an extraordinary combination of structural economic depressants of long-term duration that make it difficult if not impossible to achieve, or even approach, our potential long-term growth or full employment. The implementation of adroit policies would help, while other governmental initiatives are exacerbating the problems.

The current period has close parallels in terms of causes and pattern with the 1930s and other long-term periods of stagnation and depression in the previous century (such as that following the civil war). Though the recent recession and sluggish recovery were deceptively mild compared to those previous events, or even some previous recessions, that seeming moderation is attributable to the various safety nets now in operation to soften the adjustment process. These include deposit insurance, the RTC, unemployment insurance, welfare, social security and the corporate practice of granting early retirement benefits and severance payments to discharged workers. But the effectiveness of these arrangements should not obscure the severity of the long-term structural problems confronting the United States and the global community.

Many observers have not fully grasped the implications of the fundamental changes that have occurred. Basic long-term trends of past decades are now in reverse. As a consequence, the policies and strategies of businesses, individuals and governments developed to deal appropriately with the problems of an era of inflation, rapid credit expansion, and the cold war are no longer appropriate in an era of disinflation and deflation, credit crunch and slow debt growth, and contracting military and defense expenditures. These are monumental changes,

with monumental consequences, made even worse because we are still struggling under the burdens accepted in an earlier period.

Companies, individuals and governments are still saddled with the consequences of the expenditures they made in the past inflationary era. As a result of that period, companies adopted strategies that left them with bloated staff, excess capacity, and equipment geared to rising costs and the ability to push price increases through to customers. All of that is outdated. Now companies need to gear themselves to the risks and reality of price resistant customers, intense global competition, price cutting, deflation, declining profitability, weak demand, lessened consumer product loyalty, lessened employee pirating, and slow wage growth. For example, business can no longer afford the luxury of large numbers of middle- and upper-echelon managers who function largely as understudies, in place just in case their superiors are pirated away by competitors. These are among the most likely candidates for discharge in the current downsizing and cost cutting frenzy. There are, of course, also large numbers of workers laid off due to technology changes. But, whatever the cause, layoffs and downsizing will persist.

The huge debt burdens put in place in the 1970's and 1980's remain onerous, despite debt restructuring and refinancing by business, individuals and governments. Total debt has soared to some 2.5 times GDP in the early 1990's, up from 1.4 times in the early 1950's. To put this credit explosion into better perspective, this country's debt burden was only 1.7 times GDP at the end of the second World War. Not since the 1930's has the U.S. debt burden been as massive. Nonfinancial corporate debt equals three fifths of net worth. Corporate short-term (current) liabilities and accounts payable equal some 110% of short-term assets and accounts receivable. The real story is not so much that the debt has ballooned, but that GDP did not rise in lock step as it usually does. The reason is that the investment of the funds derived from the debt explosion of the 1970's and especially the 1980's was literally squandered on inflated values of LBOs and empty office space. That is why GDP did not rise commensurately with the rise in debt. That also suggests that it is difficult, if not impossible, to both carry and make good on this debt overhang. Commercial real estate debt is particularly vulnerable, with one out of every five square feet of this nation's office space vacant, with prices of real estate depressed and average rental earnings threatening to fall well below realistic break-even levels. The continuing and potentially worsening problems of commercial real estate are also worrisome portents for the financial institutions that hold real estate and real estate backed financial assets, including insurance companies and pension funds.

Individuals, corporations and governments will continue to deal with their debt burdens not only by refinancing, but by selling off assets and cutting costs, including laying off workers and moving to lower cost centers of production. The consequent spending caution and retrenchment, in combination with a similar pattern of retrenchment overseas, creates an ominous deflationary bias in the U.S. and world economy.

The beginnings of a global deflationary spiral are becoming increasingly apparent. This is one of the major problems confronting the manufacturing sector, as well as the global industrial economy. It is a process that threatens to create and reinforce a downward spiral in employment, production, investment, profits and confidence as it engulfs industry after industry. At the moment, we can see but the tentative leading edge of that process in price declines (as a result of increasingly intense competition) in air fares, tobacco,

diapers, electronics, and computers. But it will inevitably encompass more and more industries and products.

In order to understand this process better, it is important to recognize two fundamental elements in the current picture. First, business by preparing itself for an inflationary environment, and everything that implies, has contributed to worsening the deficiency of demand. Business has a tendency (born of the last two decades of experience) to anticipate continuing strong demand for its current products, growing markets, and the ability to push cost increases through to its customers in the form of higher prices. That has contributed to excess capacity or, depending on how you view it, a deficiency of demand for a vast array of products.

Many dispute the potential or reality of deflation, pointing to continuing increases of consumer prices at a just under 3% annual rate over the past year, despite a deceleration to a 1.5% annual rate the past four months. But Federal Reserve Governor Lindsay has indicated that an internal Fed study finds that 1% to 1.5% of the annual CPI increase is due to quality changes not recognized in the statistics. Without this component, the CPI is actually up only some 1.5% over the past year, and not far from zero over the last four months. Indeed, much of any residual consumer price inflation is due to service price increases. Deflation in manufacturing prices is certainly a realistic threat, but it might already be a reality.

The second and more important fundamental element in the deflationary process is that business shifts its cost forward to its customers, if it possibly can. But, in a period of deficient or weak demand (as now) it is unable to shift its costs to its customers without losing them. Instead, business is forced to shift these cost increases back to its employees and to other factors of production. These cost increases (that will be shifted) include increases in taxes, wages, fringe benefits and other costs of production, such as the expenses of the family leave bill and other expensive regulatory requirements or potential legal vulnerability. The means of shifting these costs back on employees and suppliers are fairly obvious and unfortunately debilitating for the U.S. manufacturing sector. They are essentinally a set of taxes paid not by employers, but by employees through job layoffs and salary reductions.

Business, especially in manufacturing, has been reducing the number of its employees. Where possible they have reduced their salaries and wages and reduced their fringe benefits, by shifting to part-time, temporary, or contract workers. U.S. corporations are also shifting to lower cost centers of production within the U.S. or abroad (perhaps enticed by lax regulation, lower pollution controls and lower worker safety standards). Business is also outsourcing, rather than producing in house, and putting pressure on their suppliers to reduce their prices. That downward price pressure on their suppliers reinforces the deflationary spiral as companies around the globe attempt to maintain their market share through cutting prices and production costs, including a step-up in layoffs. But the American Management Association reports that these efforts are failing to produce the desired results. Even though layoffs among surveyed firms have recently been worse than at any time since the 1990-91 recession, they report that they are not achieving an improvement in productivity and profits. Of the 870 firms surveyed, 47% laid off an average of 10.4% of their work-force. Though this contrasts with 56% of these firms which laid off workers in the recession, that was counterbalanced by more hiring than now. But even after these layoffs and downsizing, less than half the companies experienced an increase in profitability and merely one third an increase in productivity. That promises still further efforts at cost cutting, downsizing and layoffs, keeping the deflationary process in motion in an ever broader and deeper

spiral. Indeed, the American Management Association concludes that the layoff pace will continue at least as strong through mid-year 1994 as over the last 12 months.

Other forces are also depressing the U.S. and global economy, taking their toll on manufacturing. One of the most pronounced is the contraction in defense and military spending and employment that follows from the end of the cold war. The cold war, like major hot wars that preceded it this century and last, provided a major boost to manufacturing and the U.S. economy. A reversal of that process is thus, understandably, a major depressant on the U.S. economy. And because this is a global process of defense expenditure contraction, it is having an impact in globally depressing manufacturing and the industrial-world economy.

U.S. defense spending as a percentage of GDP declined from 6.5% (or $276.7 billion) in 1986 and 6.4% (or $295.6 billion) in 1987 to 4.9% (or $305 billion) in the second quarter this year. But the 1.6 percentage point decline we have already experienced since 1986 is smaller than the decline that probably lies ahead. By 1997 or 1998 U.S. defense spending will probably be down to between 2% and 3% of GDP, indicating an additional 1.9% to 2.9% reduction relative to GDP. That promises a further major depressant on the U.S. economy and manufacturing. The economic and financial dislocations that typically occur following major wars have often been responsible for depressions. It is no wonder then, given the relative contraction in military spending alone, that the U.S. is experiencing a virtually stagnant recovery that comes close to fitting the definition of a "growth recession."

There are numerous other causes of the decline in U.S. manufacturing and manufacturing jobs. Other countries are not as burdened by pollution controls, health care, pension benefits, safety standards, patent and royalty rights, or our wage levels.

Our foreign competitors also exhibit certain different approaches to competition that work to their distinct advantage. Other nations are not as short-term profit oriented, but are willing to pursue market share goals for longer periods without requiring the early earnings success that is common in the U.S. as a minimum justification for continuing in operation. There is more central government guidance and support. There is a greater export orientation, both from government and business. Many nations have a value-added tax structure (in place of the corporate tax) that can be rebated for exports and imposed on imports. Other nations permit or encourage business cooperation, that in the U.S. would risk being considered illegal under antitrust or other legislation. Some foreign companies have emphasized product quality and service to a greater extent than have domestic firms. Some businesses overseas appear to have been able to instill greater worker loyalty, cooperation and contribution to product improvement than seems typical in the U.S.. There is a greater appreciation of micro economic analysis among foreign competitors who determine the appropriate production capacity based on the lowest point on the marginal cost curve. There also appears to be a telescoping of the various sequential steps involved in new product development and introduction among our more successful foreign competitors. That even allows them to be the first to bring to market products developed elsewhere. And product success is quickly followed up by innovation and new product introduction with modest price increases, a tactic that may have been originated by Alcoa as a means of limiting freedom of entry.

The decline in manufacturing employment is of long-term duration, but the downtrend now threatens to worsen, and at a time when alternative sources of

employment growth are less likely to be offsetting. The peak of manufacturing employment was reached in 1979, at 21.04 million, dipping in the 1980 and 1981-82 recessions, to reach a low of 18.4 million in 1983. Though there was some increase in manufacturing employment in subsequent years, the 19.4 million level of manufacturing in 1989 was still 1.6 million below the peak 1979 level. Had it not been for a 52% rise in national defense expenditures between 1979 and 1989, the 1.6 million manufacturing job loss between 1979 and 1989 undoubtedly would have been significantly larger. Since January 1989, manufacturing employment has again begun a sharp downtrend. But unlike the 1980's, there has been no early post-recession improvement, nor is there likely to be one any time soon with the U.S. and global economy weak, defense declines, and deflationary forces in evidence. Indeed, there is an acceleration in major layoffs and corporate downsizing underway. Challenger, Grey and Christmas, a firm that monitors layoffs, reports that through August this year, layoffs are 20% ahead of where they were through September in 1991. And the American Management Association reports in their mid-September survey that companies intend to accelerate layoffs over the next six months. Thus, there are many reasons to believe the situation of U.S. manufacturing will continue to worsen, quite probably significantly.

The decline in manufacturing employment has been attributed to improving productivity trends. For example, manufacturing output, as measured by industrial production, continued its general uptrend since 1982, except for the 1990-91 recession. But that does not suggest that the decline in manufacturing employment is adequately explained by increased productivity, or that it is a benign development. Far from it. The current decline in manufacturing employment stems from more farflung and deep-seated fundamental problems. Indeed, the recent improvement in productivity is deceptive to the extent that it stems from the layoff of relatively unproductive middle managers, or perhaps of researchers, which does not meaningfully or immediately reduce output. What is still more worrisome is the likelihood that the decline in jobs is larger than reported. One suggestion of this is the 750,000 fewer employees in June reported to states in corporate tax returns than are reported employed by the Bureau of Labor Statistics. Moreover, a shift to part-time work could create double or triple counting of some employees on multiple payrolls.

The conclusion that follows from all of the foregoing is that there is a dramatic downtrend in manufacturing employment in the U.S. and that it is significantly exacerbated by perverse U.S. policies.

The third main question is how essential is manufacturing to a modern economy? What are the consequences of a manufacturing decline on the American economy, growth, and U.S. workers? The decline in manufacturing might have been a less likely subject of these hearings if there were sufficient growth of profits, investment and offsetting good paying jobs elsewhere in the economy. But that is not the case. Meaningful high-paying job growth in other areas of the economy are not readily replacing manufacturing job losses.

Though the loss of lower paying manufacturing jobs is regrettable, that is not an area of primary concern, especially if it is the result of comparative advantages elsewhere on a level playing field. However, the long run future of this country is dependant on the maintenance of our position in high technology industries and products. The primary reason is that it is very difficult to remain in the forefront of research and development of new products and technology if you are not involved in the leading edge of that research and technology. These concerns go far beyond potential military applications of such developments and technology. The advances in science and technology are the building blocks for further and future advances in technology and

science. Our hold on this area must not be allowed to slip from our grasp. Therein lies the best hope for future growth of our economy and our standard of living. For that reason the decline between 1985 and 1991 in the percent of GDP devoted to research and development spending (typically associated with high technology industries) is a worrisome development. (See Butler, Alison, "Is The United States Losing Its Dominance in High-Technology Industries?" Review, Federal Reserve Board of St. Louis November/December 1992.)

The final question that we are here to address is what can be done to strengthen manufacturing, and increase manufacturing jobs and wages. In short, what are the solutions to the various problems confronting manufacturing in the U.S. as well as in the global economy. The potential solutions to the rapid erosion of manufacturing jobs is as varied as their causes. The stagnant U.S. economy, and the risks of an extended continuation of this dismal economic environment both domestic and globally, certainly calls for immediate remedial action. Following are a series of suggestions for initiatives to deal with various aspects of the problem.

The Fed should ease further, and significantly, to ensure the sustained growth of bank credit to private business.

There should be an end to the credit crunch. Bank examiners should be required to consider the needs of the community in their evaluation of questionable loans and bank guidance. There should be a moratorium on the implementation of the BIS agreed increase in bank capital requirements (or better still a roll back).

Because of the importance of access to credit by small business, the Small Business Administration should be encouraged to lend directly when appropriate credit is not available from traditional sources.

Consideration should be given to investment-tax credits to spur capital investment, especially for equipment to take advantage of new technology. A job-hiring credit of some form also warrants consideration. A well thought out investment tax credit would also help boost productive capital investment spending.

Consideration should be given to shifting the corporate tax structure to a value added tax that can be rebated on exports and imposed on imports to help improve the competitive position of U.S. industry.

The Federal government should adopt an industrial development policy. The purpose would be to provide guidance to business, particularly small and medium sized businesses likely to benefit most from a stream of information and suggestions on where their investment dollars might be most expeditiously placed and which are the most likely avenues for productive research.

The top men in various fields should be invited to hold industry wide sessions, perhaps regionally, to plan collectively for the future. Recognized experts in various high technology disciplines could be invited to take "dollar-a-year" government positions to foster progress in their fields. There could well be pilot projects encouraged, such as the consortium of automobile manufacturers to develop an environmentally correct car. Such projects would of course involve assurances of being free of the risk of antitrust suits.

U.S. manufactured exports should be more aggresively promoted. I was delighted to see President Clinton's national export strategy, including the change in the definition of exportable computer equipment. Exports hold great promise for expansion. But U.S. businesses are unfortunately not as export oriented as they might be. The Federal government can make an important contribution to export growth by further developing the expertise necessary to help assist companies in better recognizing export market potential,

securing export financing, tailoring products to foreign needs, and making appropriate contacts overseas. More emphasis should be shifted away from homogeneous products, such as agricultural, to nonagricultural products.

Trade barriers should be reduced where possible, but with an eye to achieving a level playing field in such areas as pollution control, respect for U.S. patents and copyrights, and of course reciprocity.

In order to restore confidence and improve prospects for financial stability and economic growth, the U.S. should take leadership in attempting to restore exchange rate stability by moving back to a fixed exchange rate system. While it is not my area of expertise, others whom I respect have noted that a return to a gold linkage in the international currency system would help to restore long-term business confidence and sanity in the international monetary system, trade relationships and investment decision making.

Improving the level of U.S. education from preschool through advanced graduate training is a primary prerequisite to remaining competitive, especially in sectors with high paying jobs such as technology. Studies of the sources of economic growth concluded that investment in education bears the greatest return in terms of economic growth. (See Dennison, Edward F., Sources of Economic Growth in the United States and the Alternatives Before Us. (1962))

The importance of education in retraining for those who have been displaced because of changes in technology, shifts of employers to other locations, the declines in military spending and base closings suggest the need for displaced workers educational assistance. Encouraging companies to retrain workers, providing financial assistance through the tax system for displaced worker retraining, encouraging technical schools and schools of higher education to accept such students, perhaps in special programs, would benefit not only manufacturing but society in general.

ATTACHMENTS TO MR. BRAVERMAN'S PREPARED STATEMENT

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Growth Recession?

Bonds Are a Great Buy, Says Crack Interest-Rate Forecaster

By Gene Epstein

ECONOMIC forecaster Philip Braverman prides himself on the fact that he has accurately predicted the sex of all seven of his grandchildren. The odds against such success (as long as the odds against guessing seven consecutive coin tosses) are more than 100 to 1. "My method," he says, "is simple. In each case my kids have picked a name for a boy and a girl. I choose the name I like better—and go with that preference. God smiles and gives me what I preferred."

Recently Braverman has done almost as well in predicting what the Federal Reserve will do next. Chief economist at New York-based DKB Securities, Braverman writes a weekly market letter that forecasts the economy in general and interest rates in particular.

The 59-year-old Braverman has been hard at work writing such letters for various employers since 1975, when he contributed to a weekly market letter for Chase Manhattan (where he was originally hired by Paul Volcker, serving as his assistant). An economist trained at Columbia and New York University, Braverman has often been out of step with the views of his colleagues—and occasionally with those of his employers. But a close look at his long track record shows that he's frequently been uncannily accurate. Right now, he believes that interest rates are headed for a fall and that economic growth is trending down.

Braverman was one of very few economists to predict the most recent reduction in the Fed funds rate (the rate on overnight interbank loans). In his letter of Dec. 20, 1991, Braverman forecast further reductions in the funds rate even though it it had been eased that very day to 4% (from 4.5%). "What the Fed has yet to recognize," he wrote, "is that far deeper cuts relative to inflation are necessary to offset the credit crunch." In virtually every weekly market letter thereafter, he repeated his forecast that the Fed would ease again. As late as March 6, he was still calling a further reduction "inevitable"—and on April 3, he wrote, "The recovery pace is slowing, with ominous advance indications that the economy this spring will be weakening anew."

Robin Holland for Barron's

Philip Braverman

Just six days later Federal Reserve Chairman Alan Greenspan announced what the New York Times referred to as a "surprise cut in interest rates," dropping the Fed funds rate by another one-fourth of a point to 3 3/4 .

Now, Braverman says flatly, "The Fed will ease further, probably by mid-year."

He makes that forecast despite last Tuesday's estimate from the Commerce Department that in that first quarter, the economy grew at an annual rate of 2%, that March factory orders rose 1.6%, that March personal income increased 0.6%, and that the March index of leading indicators edged up 0.2%. "The President applauds the news as proof positive that the economy is now in a solid recovery," Braverman comments. "I wish I could join him, but the facts tell me otherwise."

Braverman points out that in his market letter of the previous week (April 24), he had already anticipated the news about the first quarter's growth: "Firstquarter GDP, Tuesday, is likely to rise by some 2%," he wrote, "up sharply from the 0.4% fourth quarter rise." But he attributed much of the growth to one-time factors that he has been writing about for months: distorted seasonal adjustments (due to the war-related economic free-fall last year), extraordinarily warm winter weather this year—and to these factors he characterizes as "unsustainable" (a step-up in transfer payments and in tax refunds, and an "aberrant" rise in exports). Braverman believes that second- and third-quarter growth will not even match, let alone exceed, the first-quarter pace.

So despite continued easing

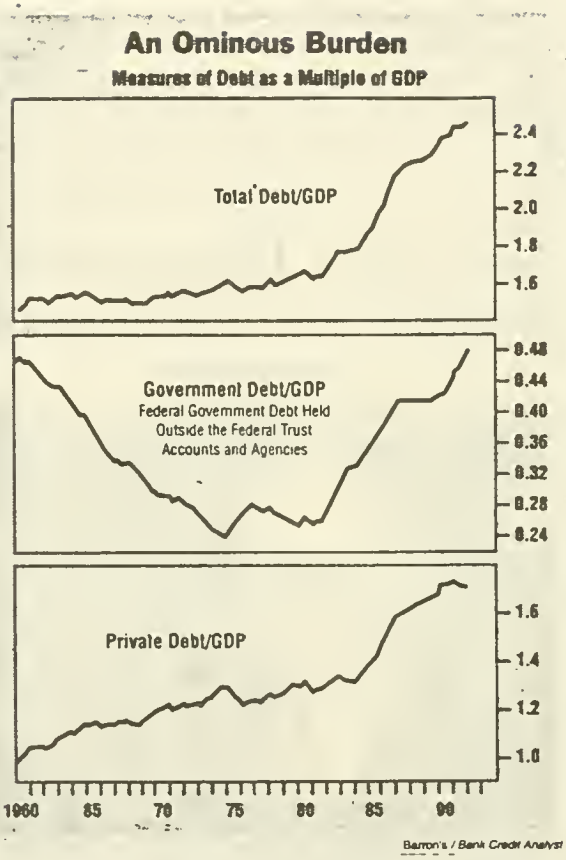
of the Fed funds rate, Braverman forecasts that through the end of this year and into next, the best we can hope for is a "growth recession"—"and that's not an oxymoron," he insists.

"To me, a growth recession means 2% growth or less in gross domestic product, unemployment remaining high and possibly rising, capital investment and incomes flat, high or rising levels of bankruptcies, low inflation, and a renewed decline in interest rates." That's the good news, according to Braverman. On the down side, there's "one chance in four," he adds, "that the economy could slide into a depression worse than anything we've seen since the 1930s."

But that kind of scare talk has been circulating among professional doomsters since the late 'Seventies. So it hits you square in the prejudices. Is Philip Braverman just a another stopped clock—a Johnny-one-note who sees apocalypse around the corner—year in, year out?

To answer that question, Braverman obligingly sent over a wheelbarrowful of virtually every weekly market letter he's published since 1975. A quick survey of his career shows that indeed, over the years, Braverman has been gloomy—but not consistently so.

Ironically, in 1979, he was predicting record highs in interest rates, at levels that few forecasters could then imagine. In the summer of '79, when the prime was at 11 1/2%, he said that rates would continue to climb. By November the prime was at 15 3/4%. By December, with the prime at 15, Braverman wrote that "upward pressure on interest rates will extend into 1980." His employer, Chase Manhattan, was unhappy. The bank's management said, "Why are you telling our customers rates will go up when we're telling them to buy bonds?" Braverman replied, "Why are you telling them to buy bonds when I'm telling them that rates are going up?" In April, the prime hit 20%. (Somehow, employers are never grateful when you're right and they're wrong. In mid-1983, Chase killed his newsletter and he moved on to a small primary bond dealer that was soon acquired by Irving Trust.)



Now Braverman's interest-rate gloom has reversed direction—and, in so doing, reduced him to puny single-digit forecasts: By next year, he says, a sluggish economy "should push the prime to 5 1/2% (from 6 1/2)."

But while Braverman was, in his own way, as pessimistic in '80 as he is today, in the dozen years between, his weekly market letters have often been reasonably sunny. By the mid-'Eighties, Braverman was downright optimistic. (He acknowledges he was a little late in catching 1983's rebound from the 1982 recession, but by mid-July of '83 he was predicting a "dramatically strengthening economy," and remained bullish through '83 and '84.)

What's remarkable is not that he was cheerful—most forecasters were ebullient through much of the 'Eighties—but that he proved almost as accurate a bull as he had been a bear. In January 1985, Braverman anticipated "real GNP growth of 3-4%." Actual result: 3.4%. In late December 1985, he called for 1986 growth of 3%. Actual result: 2.7%. In early February 1987, he expected GNP growth of "under 2%." This time he fumbled—the economy actually grew 3.4%.

Braverman was beginning to turn bearish. Again, his direction was right, and he was ahead of the pack, but he was premature. By early 1988, he anticipated "an economic slowdown," when in fact 1988 GNP growth was a healthy 4.5%."

In 1989, he was more on the mark, forecasting economic growth of somewhat better than 2.5% in mid-January—and in fact, 2.5% was the number that came in. Then, in July 1989, Braverman began to sound early warnings of something worse to come: Sluggish growth might be moving the economy to the "brink of a full-fledged recession."

An exhaustive reading of Braverman's market newsletters over these years is, well, exhausting. They show a mind that's intense to the point of obsession about getting things right. Braverman admits that, through most of this period, after finishing his market letter on Friday, sealing it, stamping it, and sending it out into the world—he would nonetheless bring his final version home over the weekend and continue to edit and re-edit, sharpening and honing after the fact. "Not the most productive practice," he comments, "though it probably improved me for the next week. But a few years ago, one of my sons kidded me so much about it that I finally quit the habit."

In January '90 Braverman was predicting 1% annual growth for the coming year; it turned out to be 1%. In the months that followed, Braverman relentlessly raised the unwelcome specter of recession, writing in August 1990: "It is most likely that the U.S. economy will move into recession over the quarters ahead, if it is not already in a recession." Once the numbers became available, July 1990 was in fact proclaimed the month when the downturn officially began.

During these years, Braverman was a contrarian. The consensus viewpoint was summed up in what might be described as the forecasters' forecaster: Robert Eggert's Blue Chip Economic Indicators, a Sedona, Ariz.-based newsletter that averages the forecasts of 50 prominent business and academic economists. In August of 1990 that publication anticipated that 1990

would come in at 1.3%—but that by 1991, growth would pick up to 1.7%. (Actual preliminary estimate:—0.7%.)

By early November 1990, Braverman was predicting a "worsening recession." At about that time, Fed Chairman Greenspan was still predicting "recession-free growth," according to statements reported in The Wall Street Journal on Dec. 26, 1990. Braverman stuck to his bearish position: Even with the successful resolution of the Gulf war, Braverman predicted only an "economic bounce" in March '91, believing that the economy's problems were far from over. Fourth-quarter economic growth came in essentially flat at 0.4%.

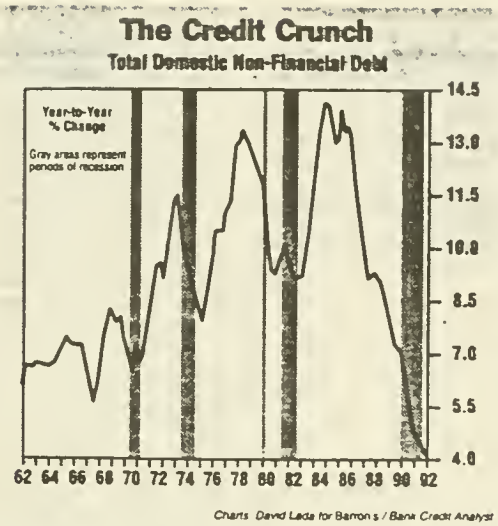
So if that's were we've been, where are we going?

"The economy," Braverman comments, "is like a submarine that's just recently surfaced. Now most economists, including Chairman Greenspan, are saying that it's going to turn into a low-flying airplane." (The Blue Chip consensus puts economic growth in 1993 at 3.1%)

Braverman disagrees. "My best hope is that during this year and next the boat will stay on the surface. My worst fear is it will sink again."

To explain his outlook, Braverman looks at the economy from virtually every angle, offering a series of snapshots that focus on: public and private debt in relationship to GDP, consumer debt in relationship to real income, housing starts and exports. Finally, he turns to his specialty, interest rates, which he says will trend down. Meanwhile, the banking, thrift, insurance and commercial-real-estate industries, he says, will continue their slide.

Braverman begins with private and public debt. While most economists pin the malaise of the 'Nineties on the excessive borrowing of the 'Eighties, Braverman laments not that so many dollars were borrowed, but that so little return was obtained from the money lent and spent. He points to the ratio of public and private-sector debt to



Charts: David Lada for Barron's / Bank Credit Analyst

GDP, observing that it has approached its highest levels since 1932. "If all that borrowing had produced real growth, the debt/GDP ratio would have remained stable, and the bust never would have happened," he declares. "But the debt was wasted, the way a compulsive gambler throws away his family's money on a sure thing that doesn't come in."

So the increase in the debt/GDP ratio is, to Braverman, the sorrowful emblem of past errors—and future problems for everyone from commercial-real-estate firms to corporations laden with LBO debt, to states, localities and households burdened with the fruits of unproductive borrowing.

An increased percentage of the debt went to real estate—which helped create monuments to waste in the form of empty office buildings, hotels and shopping malls.

"Right now, the federal government is running deficits, and what's important is that they involve the wrong kind of spending—spending that can't stimulate the economy," says Braverman. "Expenditures are up to soften the burden of increasing poverty and unemployment—and to bail out the banks and thrifts. The thrift and bank bailout is like putting a load of dirt into a sinkhole. It doesn't build anything—it's like trying to get to ground level before you put in a foundation by preventing the loss of deposits by individuals, businesses and government. So at best, the bailout has a neutral effect on the economy."

No surprise, then, that the credit splurge of the 'Eighties has given way to the credit crunch of the 'Nineties. But once open-handed thrifts, commercial banks, investment banks, insurance companies and pension funds are becoming tightfisted, notes Braverman, not only in response to the losses they've already realized (or anticipate) on past lending, but in response to the worsening financial condition of potential borrowers. The Catch 22: Those borrowers will become more creditworthy only if the recovery grows stronger, and any sustained economic recovery depends on a rapid acceleration in credit (see chart).

As for states and localities, Braverman notes that many are caught in a vicious circle:. "If they borrow more, their credit rating will be downgraded—so their cost of borrowing will rise. But if they don't borrow more and try to pay off the debt, they'd have to increase taxes. But if they increased taxes, business will leave, cutting next year's tax revenues."

Moreover, Braverman stresses, the debt problem has hit the consumer, making a consumer-led recovery unlikely. With growth in real disposable income flat, household debt and interest paid on debt still burdensome, taxes increasing and consumer confidence still at recession levels, he calls the potential for significantly increased consumer spending "dim."

Right now, one area of potential light is housing starts. "The cardinal principle behind the optimism of the Fed is that housing is in safe harbor," says Braverman. "But anyone should be leery of placing confidence in a sustainable housing recovery. We've already begun to see a decline in the number of permits for new construction"—down 6.5% in March"—and in March there was a decline in single-family home starts, newhome sales and mortgage applications. Multi-family home starts are up, but so are apartment vacancy rates. So the brightest spot in the economic firmament may become one more delusion."

As for the chances of an export-led recovery, Braverman points to the intensifying global recession—led by the behemoths, Japan and Germany. "If, as expected, those economies catch cold, other economies should contract pneumonia. So while healthy exports were one of the bright spots in the U.S. economy of 1991, they're likely to flicker out in '92."

As if all this were not enough, Braverman points to the downtrend in defense spending and the level of interest rates, which are historically high compared with inflation: "To pull out of a recession, you generally need interest rates to go below the level of inflation," he notes. "The only exception was when we pulled out of the '81-'82 recession. But that upturn was fueled by the substantial Keynesian $100 billion-plus tax cuts."

At this point, interest rates are running well above inflation—as measured by last year's 3% rise in the consumer price index. "Treasury-bond yields of 8%," Braverman points out, "are 5% above the

rate of inflation. And business can't borrow on a sustained basis at rates that are higher than their ability to raise prices."

For this reason, Braverman believes that Chairman Greenspan will be forced to continue easing in order to bring the Fed funds rate down to or below the rate of inflation. But even then, he points to the aforementioned list of weak spots in everything from exports to domestic consumer debt, and he remains doubtful of anything better than a growth recession.

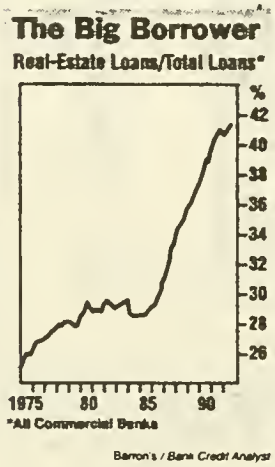
As for the prospect of a recession so severe that it could bring back that scary word depression, Braverman's concern is that there are storm clouds everywhere—bad enough for bankruptcies to skyrocket and for unemployment to soar into double digits.

"This is a debt-deflation recession," he says somberly, "and it's far more dangerous than the typical inventory recession. Inventory recessions come to an end once the excess is worked off. So what you get is a relatively quick solution to a temporary problem. But a debt-deflation recession requires a prolonged adjustment that can be far more severe."

Braverman even dares to use the word depression in describing the current situation. "Actually," he observes, "this recession is already a disguised depression, since the real loan losses of banks and thrifts are every bit as large as in the 1930s, when measured against the size of the economy. The difference now is that you have the FDIC to bail out depositors."

But even that safety net no longer feels as secure as it once did. "For the first time in the history of the FDIC, Congress passed legislation late last year that amounts to a possible repudiation of the 'too big to fail' doctrine. Up to now, the FDIC has bailed out deposits that exceed the technical limit of $100,000. But the legislation specifically bars this practice as of 1995 unless the FDIC and the President agree that there will be major distress in the financial system."

And at a time when banks seem to be coming back to life—with posted earnings looking healthy—Braverman quotes a March 10 statement from FDIC Chairman William Taylor: "A significant portion of the industry is not doing well at all. To put it another way, the winners are winning big, and the losers are losing big."



"Taylor," Braverman comments, "knows better than any of us which banks are which—and that's the key question. All that the rest of us know is that between Sept. 30, 1991, and Jan. 31, 1992, there was a 26% rise—to $613 billion—in dollar assets on the FDIC's secret Problem Bank and Thrift List. We also know that no bank should be judged healthy if its profits are up because of a fire sale of some of its major assets. That kind of profitability can't last."

So the $64 billion-plus question is: Precisely who are the "losers" that, in Taylor's words, are "losing big"? That's the mystery. "There may be major charge-offs," Braverman surmises, "major loss surprises in areas that have yet to be recognized."

But for Braverman, the main area of unappreciated risk is the insurance industry. "Some insurance companies are very heavily invested in problem real estate and junk bonds. If these investments go sour and there is still a risk that they will—there is no FDIC to bail these institutions out."

The ramifications of failures among insurance companies are frightening. People who have claims on them—in the form of annuities, life and health insurance—could find the money drying up.

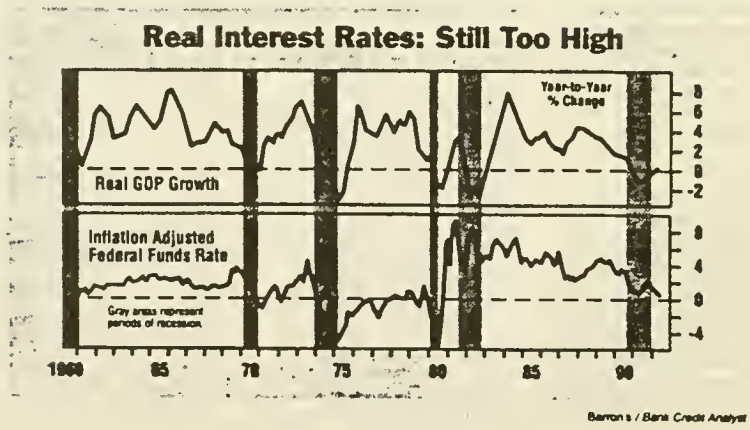
"In some cases there are insurance companies that have half their assets in real estate and in junk," says Braverman. If the companies were forced to sell their depreciated assets at distress prices, that could be a further major depressant on already depressed real-estate prices—and junk-bond prices would plunge. Then other institutions that hold such assets—including investment banks, pension funds, thrifts and commercial banks-would get hit.

"According to the National Association of Insurance Commissioners," Braverman relates, "there is a long list of companies that already have risky assets substantially larger than 'adjusted surplus'—which is their financial cushion. If some of the major companies fail, they could take a part of the economy with them."

Put the pieces together, says Braverman, and the whole picture is summed up by the increase in debt in relation to GDP.

"What I find really ominous," he observes, "is the interest burden. At the onset of this recession, it was about 9% of GNP, which was higher than the last peak of 8% in the 1930s. And that 8% was due more to collapsing GNP than to the rise in interest payments. Just as troubling is the level of corporate net interest payments. Too many companies have more interest payments and other short-term liabilities than cash flow and liquid assets. Such firms are obvious bankruptcy candidates.

"Just who will fail—which LBOs, real-estate firms, pension funds or insurance companies—is hard to say, just as it's hard to say where and when. But the risk is there in so many individual cases that it seems all but inevitable that



at least some will go under."

Standing in the midst of what he describes as an economic morass, predicting that interest rates will decline further, just where does Braverman recommend putting your money—in a mattress?

"No," he says, "I'd do the obvious thing and buy noncallable, long-term Treasury and federal agency bonds. In this environment, the Federal Reserve will have no choice but to ease further, probably by midyear. I expect the Fed funds rate target, which is now 3.75%, to decline to 3% by the end of the year. That assumes economic growth of 1%-2%. So long bonds yielding 8% offer extremely attractive yields."

What if he's wrong about the economy?

"What's interesting," says Braverman, "is that even if the economy is in a sustained recovery, interest rates are likely to decline anyway."

He explains that the cyclical lows in interest rates typically occur "not in recession, but after recession, and not immediately after, either. For example, the lows in interest rates following the 1981-82 recession occurred in 1986. The lows in interest rates following the 1973-75 recession occurred at the end of 1976, and the interest rate lows from the 1969-70 recession occurred in 1972. So either way, interest rates should come down."

But as his record shows, he's not a constitutional pessimist."I hope there is a sustained recovery," Braverman confesses. "The lives of millions of people"—not to mention those seven grandchildren—"are a lot more important than my forecasting record. But I don't expect it. In a rare burst of candor, Fed Chairman Alan Greenspan said in December that the economy is heading into 50-mile-an-hour head winds. If even Mr. Greenspan is worried, so am I."

The New-Age Economy

Our Panel Debates Where It's Taking Us

THE sluggish rate of growth in gross domestic product through the first half of this year has raised fears that the recovery from the '90-'91 recession is stalling once again. Consumer confidence remains gloomy — and manufacturing as of August contracted for the third month in a row.

To get a better fix on the economic outlook, BARRON'S recently held a Roundtable discussion with three Wall Street economists. Jason Benderly of Benderly Economic Associates, Philip Braverman, chief economist at DKB Securities, and Joseph G. Carson, chief economist of Dean Witter Reynolds Inc.

To find out how each views the outlook for economic growth, employment, inflation and interests rates, read on.

—Gene Epstein

BARRON'S: *Joe Carson, growth in gross domestic product in the first half of this year ran at an annualized 1.3%, which wasn't much to write home about. Was that below your expectations?*

Carson: Yes, the first half was less robust than I had projected.

Q: How come?

Carson: In the first quarter, the surprise was the sharp fall-off in defense spending. I expected it to be down for the year, but not all concentrated in one quarter. That subtracted two points off the growth rate. So, despite the very harsh weather that hit the East Coast in late February and March, the private sector still performed reasonably well, but less than expected.

As for the very low second-quarter growth, I'm a little puzzled, because some of the benchmarks we use in measure growth, like federal tax receipts, suggest the second quarter was a lot stronger than what the published GDP statistics suggest.

Q: Then how do you explain it?

Carson: If there is one factor that stood out in the first half that took away from growth, it was the announcement of the Clinton tax package. The way I look at it, economic growth is tied to risk-taking, and I think the uncertainty and apprehension about that tax package forced a lot of people and businesses to postpone their purchases and investment decisions. And as bad as that package is, in shape and size, the uncertainty was more damaging to the economy than the tax bill itself.

Q: What's your outlook for the second half?

Carson: I think we still have the potential in hit 3½%-4% in the second half. You may get something in the third quarter of around 3%, and in the fourth quarter, a little bit above 4%. So on balance I still think 3½%-4% for the second half.

Q: Jason, what do you make of the growth pattern in the first half?

Benderly: What happened in the first half was somewhat below what I had expected, but not much below, since I had been looking for a pretty sharp slowdown. And I think it was a consequence of what happened in the second half of 1992. Consumption ran ahead of income in the second half of '92. And so long as income growth was going to be sluggish in the first half of '93, there were good reasons to expect consumption to slow, which it subsequently did. Housing had responded pretty strongly by the end of 1992 to the decline in interest rates that occurred in mid-'92, and there were reasons to expect at least a pause in housing during the first half of '93. And third, production was very strong at the end of 1992 and early '93, and it created an imbalance where production moved ahead of final sales by the early part of '93. And unless demand kicked in very sharply at some point in early '93, it meant production was going to have to weaken to bring it back in line with final sales.

Q: And looking ahead?

Benderly: I expect another period of relatively disappointing growth in the third quarter, somewhere around 1½%-2%. But by the fourth quarter, I think the stage is now set to get another rebound, another subcycle of growth, starting in the fourth quarter where GDP could go back up to the 3½% rate — not permanently, but for several quarters.

Q: Aside from your lower estimate for third-quarter growth, how do you disagree with Joe?

Benderly: I agree with Joe that some rebound is coming. But I would emphasize these swings in growth that we have had from 4½% in the second half of '92 to 1.3% in the first half of '93, back up in maybe 3% or 4% by the end of '93. Those are subcycles around a trend that is somewhere in the 2%-3% range.

Q: Phil?

Braverman: Last year I thought that whoever was President, there would be a significant cut in defense spending and that GDP growth in the first half would probably be in the area of 1½% or so. We have had a defense cut, at a more rapid pace, more concentrated than I expected. The 1.3% growth in the first half was a bit weaker than I anticipated, but not by much.

Q: And your outlook?

Braverman: It is my view that the economy will not be able to sustain more than 2% in the second half of this year and next. And growth will most probably be in the area of 1½%-2% or less.

Q: How come?

Braverman: I agree with Joe that defense was a crucial factor in dragging down the first quarter. But the weakness in the area of defense is a plague to this economy through this year, through next year, through the year after and out. While it is difficult to anticipate specific quarters in which it will be most pronounced, it is a major depressant on the growth of the economy.

I agree with Jason that a reversal of the over-optimism on the part of manufacturers was evident in the first half. The point here is that, yes, the first half was weaker than it would have been without the special factors. But I think there was a degree of optimism on the part of the consumer as well that helped boost spending in the first half, which I think is now in the process of waning.

Q: Are there other areas of weakness that you perceive?

Braverman: Many others. The global recession, which if anything is getting worse in much of Europe and is still a problem to Japan. And we have seen, more recently, the weakness showing up in exports. And that's probably going to be a further depressant on the economy. We have seen some indications of consumers' ability to finance expenditures with borrowings. But without good job prospects — and I don't think there are any — that is already beginning to wane. For the second half, we will see less growth in consumption, particularly in purchases of durable goods, than we saw in the first half. Business, while it is not going to make the same mistake of overdoing a buildup of production that is not justified by sales, is going to be restraining itself both on the production side and on capital investment.

Q: How do you see profits faring?

Braverman: Profits are likely to look increasingly less favorable than they have been. To the extent that there is some forward movement on profits, it is going to come from continuing layoffs, continuing contraction in manufacturing on the part of companies that are downsizing in order to compete. I see that process continuing into next year, as well. So, again, I see an economy next year like this year with problems concentrated in individual quarters, making it appear that it is due to a special factor here and a special factor there.

Benderly: I agree with Phil that there's no reason to completely dismiss the weakness we had in the first half of '93. But I think he ignores the fact that there are subcycles of growth that go on around whatever the trend rate of growth is. We had 4½% growth in the second half of '92 and 1.3% in the first half of '93. That's an average of close to 2.9%. If we go back to what I think will be about 3½% growth for a couple of quarters, it will keep the year-to-year growth rate of real GDP somewhere between 2% and 3%, which is what I think the trend is.

Braverman: What I am trying to convey is that in the fourth quarter we had a perception that the economy grew at a rapid pace. That perception, I believe, was inflated by a lot of special factors: the shift of income from first quarter '93 to fourth quarter '92 to avoid the Clinton tax increase, the boost to the economy from the aftermath of Hurricane Andrew, the concerted effort by President Bush to prime the economic pump and the misplaced euphoria on the part of consumers that the Clinton Presidency would see jobs, jobs and more jobs.

All of that created a perception that the economy was solidly based in recovery. And it is that perception which has psychologically carried some of the elements of strength that we see in the first half. But I believe that's in the process of dissipating. Consumer confidence is beginning to wane. It is still at recessionary levels and it has weakened. And in addition, business sentiment is plunging, as one would expect. And on top of this fiction of great strength in the economy or at least the potential, there's the additional burden of the tax increases and spending cuts, with another tax increase for health care and the burdens on business that health care will bring.

So I believe there's a sea change in perception that's in process. And that process is in the early stages.

Carson: Phil talks of a sea change. I see it happening, too, but of a very different kind. This has been an investment-led recovery. In fact, this is a decade that is going to be one in which the productive side of the economy grows much faster than the demand side. If you look at the first two years of this recovery, nonresidential investment spending is growing almost as fast as the recoveries of '75 and '83 despite the fact that overall GDP growth is growing at maybe less than half of those recoveries. We have to keep that in mind because we are focusing on the consumer so much.

Photo: Richard M. Rowan III

Joseph G. Carson Philip Braverman Jason Benderly

Q: Is that why we are getting subpar employment growth?

Carson: Yes. We are employing more capital than labor. But one thing we are doing here is building a stronger base to grow faster in future years. It is going to be driven domestically as companies bring production back home, and as multinational companies around the globe move production to the United States to take advantage of the better growth prospects and the lower costs of operation. Those trends are in place today and that's why I am optimistic on the U.S. growth path, going forward.

Q: Going even further forward, then, what estimates do you gentlemen make for the trend rate of growth in gross domestic product from the middle of '93 to mid-'95?

Carson: I would say that our trend rate of growth is probably 3%-3½%.

Q: When you say trend rate, you mean average rate of real GDP growth that washes away the quarter-to-quarter fluctuations that Jason refers to?

Carson: Yes.

Q: Phil?

Braverman: I would put the trend rate of growth at 1½-2% at best over the two-year period.

Benderly: I take the middle ground of 2%-3%.

Q: Joe, what lies at the core of your long-term optimism?

Carson: Well, as I said, this is an investment-led recovery — and more so than is generally recognized. Take the big story of the past few years — the boom in computer software. Company after company and industry after industry are investing heavily in computer software to improve labor productivity. Yet, because computer software is not part of our capital stock, today it is not included in the investment statistics. That is why you see growth being understated and productivity being reported at low levels. But in the future, the Commerce Department will put the computer software into our capital-stock statistics. And you will see upward revisions of growth rates, investment rates and productivity.

Q: How important is computer software when you put it into the numbers?

Carson: If the investment in computer software over the past two years is growing in tandem with just the rise in information-processing equipment, then GDP growth has been understated by almost 1%-1½% over this two-year period. It is an amazing miss on their part.

Q: That would show up in the investment portion of GDP?

Carson: Yes. Right now they treat computer software as an expense rather than as investment. The piece that they are missing is the business purchase of computer software that you see being put in place throughout the U.S. How big is that industry? I don't know. How fast is it growing? I think it is growing as fast as the personal-computer market. It has revolutionized the computer industry. It is really helping companies remain competitive here and around the globe. That is why I think we have a very strong investment cycle developing.

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Braverman: That is offset by the fact that prices are going down. So we actually have deflation in this area of computers. And because of the way in which the GDP accounts are handled, reported investment is inflated. So there is at least a wash, and I suspect a negative.

Carson: But they are trying to say that the machine purchased today, although it costs less than a machine purchased yesterday, has twice as much capability. And the way you do that is through real purchasing power.

Benderly: My problem with Joe's point about computers is that it may simply mean we have excess capacity in computers because people don't use the capacity they have. I am not sure that computers should really account for as much of an increase in the quantity of investment as the GDP accounts calculate.

Q: Phil, would you comment on Joe's view that this is an investment-led recovery?

Braverman: When you look around it is hard to identify anything that is growing other than housing and investment. If not for these sectors, we would have nothing that is even passably called a recovery. We are not focusing on the factors that brought the recession and that literally are producing a recessionary-type recovery. And this is a process that is going to continue for years to come. As a result, when I say growth can be 2% or less in the next two years, that is my optimistic view.

Q: What's your pessimistic view?

Braverman: My pessimistic view is that the pileup of these depressants could become so severe that it is possible that we slip back into recession. Or at the very least, to the verge of recession. My concern is that the pick-up that we saw over the recent quarters are in themselves special factors.

Q: And what are the general factors?

Braverman: We still have a defense sector that is in dramatic contraction. And that is going to persist. We still have corporations attempting to maintain their potential to compete by cutting costs, cutting prices, downsizing, laying off workers. Exports don't rise because foreign companies are exactly in the same boat. And they reduce their prices. They downsize. So there is an inadequate umbrella of foreign price increases to allow U.S. firms to raise prices and profits. These and other factors are involved in keeping the U.S. economy's growth very limited.

Benderly: But unemployment is down from where it was one year ago. I don't know any way to dismiss that as an aberration. I think it is true that real GDP growth over the past four quarters was somewhere between 2.5% and 3%, probably closer to 3%, year-to-year. Reflecting that, unemployment is down. I think we have had real growth since the recession ended in the first quarter of 1991. But it has been subpar. I don't think it has been a recessionary recovery. I think it has been real growth, just subpar.

Q: What are the elements that make it subpar?

Benderly: In terms of investment-led, housing-led whatever, part of what we should do is try and put them into the context of what the norms are for growth. And in that context, the growth rate of business fixed investment that we have had in '92 and the first half of '93 is pretty much exactly in line with what the historical norms are for early recovery periods. So we have gotten just as much business investment as we normally get. We haven't gotten as much consumption. We haven't gotten as much housing. And we have gotten no boosts from inventory restocking. Those are really the missing pieces in this recovery. We have not had fiscal stimulus at this point, either.

Q: What's the likelihood that those factors can come back and boost the recovery?

Benderly: Well, we are past that period of a recovery where it makes any sense to go back and pick out norms. When you first come out of recession, you can get a number of things all coinciding and pushing growth up to historically what was about a 7% real GDP growth rate. That didn't always start at exactly the first quarter of recovery. But somewhere within the first 1½ years of recovery there was a four-quarter period of roughly 7% growth. And the range is 6%-8%. It is very narrow. That took everything coming together at exactly the same time and giving you that boost. The norm for the second year or the year after that, historically, is 3% growth. It is normal for recoveries to go from 7% to 3%.

Q: And in the year after that?

Benderly: In the year after that, there really is no norm. Sometimes growth speeds up, depending on what the Fed does, what fiscal policy does, what net exports do. And sometimes growth goes the other way. So the norms are when you first come out of recession, you can get a burst. And historically we always did — an average 7%. The norm then is for growth to slow and slow very consistently in every one of our recoveries. And then after that there is no norm. You have to look at the trees because that is what makes up the forest at the current time. And you have to look at defense spending as a suppressant. I think that is absolutely true.

Q: What other factors matter to you?

Benderly: I look at declining interest rates and the impact on housing because that provides support. Declining rates also provide extra income via mortgage refinancing. You have to look at the cycle of net exports because that can suppress growth, it can also boost growth. And it does so to lagged fashion. The strength of the economy in the second half of '92 pushed up imports in the first half of '93. The weaker growth in the first half of '93 should push down imports in the second half of '93 and give us a little help during the second half of the year, probably by the fourth quarter.

So I think right now we have to look at the pieces and we have to add them up. And it is only by doing that that we can come out with what we think the trend of the economy is. Is it 3%-3.5%? Is it 1.5%-2%? Or is it somewhere in the middle?

Q: And you believe it's somewhere in the middle at 2%-3%?

Benderly: Yes.

Carson: I think that if you look at what businesses are doing, you would see signs today that you haven't seen in a number of years. For example, if you go back to the early 'Eighties, U.S. companies were uncompetitive domestically and globally. They moved production offshore. You see more and more signs that U.S. companies are moving production back home. Two or three years ago if anyone were to say that one of the Big Three were going to add a new facility in the United States, you would have been laughed at. Well, not only has Ford announced GM has announced they are building a new plant, and Chrysler is considering adding to capacity within the next few years. Couple that with the Europeans moving production here in '94-'95. Couple that with the fact that Ford and GM are now going to be producing more parts and supplies for Toyota and Mazda and other companies. Couple that with Honda increasing its local content here and shipping products back to Japan.

Q: How much significance do you place on those events?

Carson: I think those are all signs that the production side of our economy is going to grow faster in this decade. And I think we are a low-cost producer. I think the global trade agreements, the regional trade agreements, will make for an even faster growth rate over the next two or three years.

Q: But you would still call this a subpar recovery?

Carson: Of course, if you look at the first two years of this recovery, it has been subpar in terms of growth. But within the overall picture, you see some amazing accomplishments. Exports running ahead of past recoveries and nonresidential fixed investment led by producer durable equipment. And my contention is that it is not being captured.

Benderly: The export side has been a support. And the export side has been steadier than the import side. If you look at the fluctuations in net exports, which boosted the economy in the second half of '92 and then subtracted from growth in the first half of '93. More of this has been on the import side. And that is in lagged response to what is going on with domestic demand and with our own inventory cycle, because both imports and exports are very sensitive in the short run to fluctuations in final sales and inventory fluctuations. Abstracting as best you can from those things, the trend of real exports is somewhere around 6% or 7% — which, in the face of the weak growth that we have had abroad, is a statement as to how competitive U.S. goods are.

Q: Do you think our balance of trade will improve — and that our exports will eventually exceed our imports?

Benderly: I don't expect a positive balance of trade, but I do think by the end of this year or early next year, export growth should be exceeding import growth once again, which will provide a boost to the economy.

Braverman: This is a difficult objective, but what I am trying to convey is that this recession and this recovery is abnormal. It is abnormal not just in the fact that the recovery is sluggish and we didn't get the very rapid growth that Jason correctly points to in the first year. There is something unique, extraordinary, important, significant, about this period. It is not just another recession and recovery like other recessions, other recoveries. There is a little bit of difference here, there is a little bit of difference there. This sector is a little stronger. Other sectors are a little weaker. That is not what is going on here. There is a watershed, a sea change, a major development and a set of developments at work that we will look back on not only years, but decades, from now and point to as very significant.

Q: And what are those?

Braverman: We have gone through an extraordinary inflationary era. A large part of that era has to do with the build-up of defense spending. Defense spending in effect throughout the post-World War II period was quite high for a non-war period. It was a major element of strength in the U.S. economy and in many other economies. The Cold War was another form of warfare, at least in terms of the economy. And we had some 6.5% of our GDP devoted to defense. We have already come down to about 5%, and we will be coming down to between 2% and 3% over the next four to five

Continued on Page ...

The ECONOMY

Carson: "This is an investment-led recovery. Production is growing faster than consumption."

Continued from Page 26

years. That is a monumental change. That runs the risk, along with other factors, of losing some million jobs a year, on average.

In addition, we went through a monumental debt expansion, a debt explosion, where corporation after corporation, individual after individual, government after government — state, local and federal, all had a ballooning of their debt burdens. And we had an LBO explosion, we had a real-estate explosion, inflating values beyond reason. Debt-to-GDP grew astronomically, and we can't pay the freight. Corporations are downsizing.

Q: But hasn't the decline in interest rates permitted the repair of balance sheets?

Braverman: True, interest rates have come down. It has allowed corporations and governments to refinance. It has lessened the burden. It has lessened the burden on some individuals who are overburdened with debt as well. But that is a palliative. We have not yet had the retrenchment that is a necessary process for all these major burdens. This is only part of why we went through the recession, which did not resolve these problems. They remain depressants. Normally when we go through a recession you resolve the problems that brought the recession, you go into a recovery made whole. But we are not doing that. The process is one of trying to remedy the damage done through the 'Seventies and 'Eighties. And this is a long-term process.

Carson: You are right, that this was a different recession. It was a financial recession. We have all talked about how interest payments as a percent of disposable income and cash flows went to heights not seen in decades. But if you look at the repair that has been done to the balance sheets, the interest payments are now down to levels that were in place in the early 'Eighties. Corporations, cash flows and interest payments have dramatically improved. And if there was one difference in this cycle so far that separates it from past cycles, it is the fact that we did not have the fiscal stimulus. We have had fiscal drag. That is a major change. There is no question about that.

Q: What about Phil's point regarding declines in the defense sector?

Carson: I think if you look at the present budget, most of the defense cutback is behind us. So I don't think it is going to give us the dramatic cutbacks in employment or burn the economy as much as Phil suggests.

Braverman: The Defense Department's own estimate is that it is moving to 3.2% from 5% by 1997 relative to GDP.

Carson: But how that ratio comes about is very important. Does it come about because defense holds steady and the economy grows, or because the defense spending falls further? That ratio could be very misleading. I think it is coming about because the economy grows and defense stays rock steady at about $250 billion-$260 billion a year.

Braverman: Their own estimate is that 1.9 million defense and military employees will be laid off in this period. Not counting the multiplier effect of job loss among people who service the defense establishment and job loss in the communities where they are located. So it is a major depressant. And I don't think until now we have begun to address it adequately.

Benderly: It is easy to look at the layoff side of the employment picture because it is visible and it is big companies. And it is more difficult to see the job-creation side of it because it is more small companies than big companies. But I want to make two points about the years before and since this recovery that make it look relatively normal.

Productivity growth follows a cyclical pattern: where, when GDP growth moves above what it has recently been, you get about two-thirds of that out of extra productivity. Then when the economy slows, whatever are the reasons for that slowing, so that the current GDP growth is below what it has recently been, productivity growth tends to go below its trend.

Q: And your second point?

Benderly: The second thing is that when I look at credit growth, I am hard pressed to find that the parts of the economy that tend to generate credit demand are behaving any differently in recent years than they used to. So if you look at the credit-generating process as supporting the expenditures that tend to be bought with credit, durable goods on the part of consumers, business investment and inventories on the part of businesses, when you look at private credit growth and what generates it, and then look at the generation of that credit relative to the economy itself, I can't find that those relationships are terribly amiss right now. So I think I take issue with the idea that this cycle is different because of credit growth.

Q: But it is different.

Benderly: It's different for other reasons, fiscal policy being one, overbuilt commercial real estate being another.

Q: Phil?

Braverman: To start with, it is my belief that debt growth is a determinant of economic activity. So one of the reasons why the economy grew rapidly in the 'Eighties was because of the massive growth in credit. Unfortunately, that went to finance a lot of poor, injudicious investments that literally should not have been made in the first place. The reason why GDP did not grow in step with the debt, even though it often does, and why we had this soar in the debt-to-GDP ratio, is because we squandered the funds in imprudent investments that had little or no real growth content.

So, because there was an inadequate return on that investment, the debt burdens became onerous. And one way to correct for that was to try and shift from debt to equity financing. That is a way of remedying past injuries. I am not sure what the appropriate analogy is. But if one does nothing but drink around the clock and as a result has trembles, and then one goes on a diet of eggs and milk and is off the alcohol, you shouldn't necessarily conclude that all is well. The economy still deserves to be in the intensive care ward.

Benderly: This is balancing pluses and minuses. There have been, and still are, constraints on growth in the U.S., defense spending being a major one. And a still-overbuilt commercial real-estate sector being the second one. And I guess there's a perception on the part of the business sector that there is no need for employment growth any more than 1.5% or 2%, so long as productivity growth is going to be 1% or 1.5%. All of those things are constraints. And there are some things holding us up. Unless you want to say statistics for GDP growth are wrong, the economy has shown the ability to grow in the face of these constraints. I think the stage is now set for a rebound which will show the economy's ability to grow at a moderate rate rather than collapsing into recession or near-recession.

Q: But in what ways do you part company with Joe's forecast for long-term GDP growth?

Benderly: I guess in terms of the sustainability of growth above 3%. And that stems primarily from the fact that you do have to take into account the drag from defense spending. I think the trend of real disposable income growth won't break out of the 2%-3% range. It has been roughly 2½% and I don't see that it will break above 3%. Thirdly, the housing recovery to date has already brought starts above the demographically determined levels. I think how much further housing goes up is limited for that reason. And lastly, I think, net exports won't expand rapidly for a sustained period until we have very, very strong growth around the rest of the world, and that may occur in '95 or '96.

Q: Phil?

Braverman: I come in on a slower growth path than Jason does because I can extend limitations of problems. I add a few other sectors such as the inability of small and medium-size businesses to get full access to the credit they need. In addition there are the uncertainties about tax increases and health care.

Q: Joe, could you focus on where you disagree with Jason?

Carson: I think the major difference lies in what I see happening offshore. There is no question that the European economies have been a disappointment and will continue to be, probably through the rest of this year. We do see a recovery starting in Japan later this year and in Europe next year. But what I see unfolding in the next five years is a major change in global spending and savings patterns. If you go from '87 to '92, the Pacific Rim nations ex-Japan had current-account surpluses in excesses of $100 billion — that's a cumulative number. Whereas the G7 countries had current-account deficits, led by the U.S., of over $350 billion.

Over the next five or 10 years those Pacific Rim countries are going to be the spenders in the world. I think that is important to note because you see U.S. companies looking more and more to the Pacific Rim for export and investment opportunities.

Q: Let's shift from GDP to employment and unemployment. Jason, where do you think employment and unemployments are going in the next six to 12 months?

Benderly: Let me start with the unemployment rate, or average, over the next 12 months. I think it will be down slightly from where it is today. Not down by much, but down some, because the economy's average growth will be slightly in excess of potential over that period. So, not a big decline, but a small one.

Q: To what level?

Benderly: I'd put it at 6½%. In terms of employment growth, there is a need to distinguish between the short term and the 12-month growth rate because of the behavior of productivity. On average over the next year, employment should increase by about 1%-1½%.

Q: Translate that into jobs.

Benderly: Say 100,000-150,000 a month. But in the very near term, as the business sector corrects for the decline in productivity that we had in the first half of the year, there is a risk that employment growth will be

Continued on Page

The Economy

Braverman: "If not for housing and investment, there would be no recovery."

Continued from Page 2

somewhat slower than that in the near term.

Q: So you weren't surprised by the 39,000-job decline in August?

Benderly: Month-to-month payroll numbers are noisy — which is what makes them news worthy — so I was surprised like everyone else. But if you average the last three months, you get a 72,000 per month increase, which is about what I would expect, as companies attempt to restore productivity following a weak economy in the first half of the year.

Q: Phil?

Braverman: Well, I have problems with employment statistics and the labor force. It is like trying to forecast shifting sand, because the labor force in the past decade has grown at an average of 140,000 a month and over the past year at only 83,000. And we were a much smaller society a decade ago. And I don't think demographics are the entire explanation for it. So much of the seeming improvement in the unemployment rate reflects a much slower than normal growth in the labor force which more than offsets the sluggish growth in employment.

Q: Can you put a number on your projection for employment and unemployment?

Braverman: Yes, although I don't think it would be very meaningful. The official unemployment rate may stay in the 6¾-7% range, and monthly payrolls may grow at an average of 100,000 or so jobs per month. But that includes part-time jobs and the plug factor.

Q: Explain the plug factor.

Braverman: That's the number of jobs the Bureau of Labor Statistics attributes to start-up businesses they don't sample. If the plug factor is largely or perhaps even entirely fictitious, then so is a good deal of the employment gain.

Q: Can you project the number of full-time jobs that will be created as distinct from part-time?

Braverman: There I would get down to guesswork. My contention is that more than we want are part-time jobs. More than we want are self-employment. And we don't know how much of the self-employment is fictitious. We don't know how much of it is part time. We don't know how much of even the full-time are underemployed in terms of their skills. The problem is that in past cycles the people who were unemployed were largely line workers who looked at their unemployment as a temporary phenomenon. Now a disproportionate share have been middle managers. They are forced to look elsewhere than unemployment benefits to make ends meet, and as a consequence have had to take what amounts to underemployment. So the statistics themselves are one thing, the reality that underlines it is something entirely different.

Q: Joe?

Carson: I go back to my opening statement that this is an investment-led recovery, so you are not going to get job growth in this recovery that comes even close to what you had in the 'Seventies or early 'Eighties. Companies are employing more capital than labor. However, I've predicted that we would be able to generate, on average, roughly 200,000 jobs a month. We have fallen maybe 30,000 jobs short in the first eight months of this year. Going forward, I think you will see a little bit faster job growth than what we had in recent months. I think the composition will change, you will start to see more goods-producing jobs than you had in past months because of the rebound in manufacturing that Jason mentioned, as well as construction. So I think it is going to be a better balance.

Q: And unemployment?

Carson: I think it will be headed down to 6½% by the end of the year.

Q: Do you see any drag from further downsizing?

Carson: The layoff announcements have gone in three phases, and I have followed these religiously over the past three or four years. The first stage occurred in '89-'90 as the economy weakened dramatically and there were large layoffs by major companies in the U.S. The second phase shifted from outright layoffs to more early retirements and attrition. And now we are in the final stage, and if you read the reports and not just the headlines, most of the recent layoff announcements, like for P&G and IBM, are more offshore than onshore. And that's another reason why I am very optimistic on U.S. growth prospects because we have this operational adjustment behind us.

Q: Interest rates. Phil, what do you think long-term and short-term rates are going to be?

Braverman: Lower in both cases. As far as I am concerned, the economy is weak enough to keep inflation under wraps. And that is among the key determinants for lower interest rates. I think in real terms interest rates are still high.

Q: That's not what Federal Reserve Chairman Alan Greenspan has said.

Braverman: Yes, but why should I be any different and agree with him now when I have disagreed with him since this recession began — or even before? To me, historically, rates in nominal terms are still very high, even though the yield on the 30-year Treasury bond is already at 6%. My guess is we are going back to rates that we have seen in earlier eras. So we are going to see interest rates well under 6%.

Q: How far under?

Braverman: My guess is that we will decline to 5%-5½% on the 30-year Treasury-bond rate.

Q: By when?

Braverman: I will chicken out and say before midyear '94. Within the next few months there may be some backup in yields, as the market takes profits and reacts to the possibility of another false inflation threat.

Q: And what do you expect the Fed to do next?

Braverman: The economy is weak enough to suggest to me that the next move on the part of the Fed could well be an easing.

Q: That's contrary to the consensus view. How come?

Braverman: We already have evidence of fiscal drag, due to the tax increase that Chairman Greenspan promised he would deal with if it emerged. Inflation is moving below the 3% trend rate that we saw, and how low it gets is unclear. It should be 2½% or under over the course of the year ahead. And that will allow not only long rates to come down, but short rates to come down as well.

Q: The Fed funds rate is currently at 3%. How far do you see it falling?

Braverman: To 2½%.

Q: How does your projection of 5%-5½% on the long bond look in the light of history?

Braverman: It is worth noting that over most of the financial history of the U.S., the bond yield on the premier credit had ranged between 2% and 6% — not higher. So moving below 6% doesn't say that rates are low. It would still be at the top end of the historic norm.

Spreads are still extraordinarily wide from short to long. And I think that spreads will narrow. So I see more opportunity for gain in the long end than I do in the short end, even though I think it is possible for the Fed to ease further. And I don't necessarily guarantee that 5% is the low. I am simply saying that is a credible objective, near term.

Q: Joe?

Carson: Let's start with the long end. My economic growth outlook determines my interest-rate outlook to a large extent. I think the 10-year note will go back up to around 6%. That's because, since 1980, the yield on the 10-year note has always exceeded the year-to-year change in nominal GDP. And if the economy does pick up, as I expect it will, the 30-year bond yield will rise as well. Probably not as fast as the 10-year. So there will still be some flattening in the yield curve.

Q: And on the short end?

Carson: On the short end, I still think the next move for the Fed is to tighten.

Q: How come?

Carson: I think what we will see going forward is a creeping move up in inflation, which the Fed will respond to. There are five factors that argue that inflation as measured by the consumer price index should increase at a somewhat faster rate for the rest of the year. Food prices, which declined in excess of 1% over the last few months, are not going to go down again. Energy prices, gasoline prices particularly, which declined sharply in the last three months, are going up, if for no other reason than that the excise tax will rise. Auto prices are going up. I think you will see a dramatic increase in auto prices in August, September and October. The reason for that is that dealers don't have any old models to discount right now. So they're not going to provide the year-end rebates that typically occur this time of year. And the price increases on new models are pretty hefty, both on the domestic and import side. In October, I think the housing component of the CPI will move up after showing little or no change in the last few months. And I think apparel prices are headed higher.

Q: Given all that, where do you project inflation for the rest of this calendar year and next?

Carson: The CPI for this year should come in at 3¼%-3½% and next year at 3¼%-3¾%. There is another important point here on the outlook for interest rates and financial assets in general. I think the Clinton tax bill hits a specific group of the population — small in number, but very large in terms of wealth and income. I think what you are going to see happen going forward is a portfolio reshuffling away from financial assets — particularly taxable bonds — because the tax change dramatically reduces the after-tax return to those individuals. For instance, the tax climate favors investment in real estate over financial assets.

Q: You sigh, Phil. Is that an on-the-record sigh?

Braverman: Unfortunately, there is an element of truth in what Joe is saying. And it frightens me. Because there is indeed an anxiety on the part of many individuals and businesses to shift away from what I perceive are better investments to more risky ones in order to obtain capital gains which are taxed more lightly than the stream of income which is taxed more heavily. So commercial real estate has seen renewed interest even though vacancy rates remain extraordinarily high. There is an anxiety to move into junk bonds or junkier bonds. All of these are risky

Continued on Page

Benderly: "Unless GDP growth is wrong, the economy has grown despite constraints."

Continued from Page 6

pass, which strikes me as an attempt merely to enhance yield or reduce tax exposure. And while there is an element of truth in it in terms of identifying what is likely to happen, it is still a scary development which sort of harks back a little bit to what happened in the late 1920s and 1980s.

Q: Jason?

Benderly: First with respect to inflation, the core CPI—which excludes food and energy—on a year-to-year basis in July is down slightly from what it was last year. It was 3.4% in December. And it has dropped to 3.2% in July. I think there is room for the core rate of inflation to move down further on average in '93 on average in '94 and '95. And therefore I think the total inflation rate — which includes food and energy — will be flat to down.

Q: Why?

Benderly: Because the unemployment rate will decline only slightly. There has been a pattern of inflation both in labor and the product markets, both price inflation and wage inflation, to kick up initially when recovery first begins and when the unemployment rate first falls. There has also been a tendency that if the unemployment rate doesn't quickly fall

THE ECONOMY

back to its full-employment level which I would define as somewhere around 5%-5.5% today there is a tendency then for disinflation to resume after this initial kick up in inflation. And we had some of that in the first half of 1993, both in the labor and the product markets. So basically I think inflation's trend is still down, but down very gradually in '94 and '95.

Q: How about long-term rates?

Benderly: I don't think anything very dramatic is going to happen. I do think that one of the major sources of the bond-market rally through recent weeks has been the weak economy. And that's about to end. But if this is nothing more than a subcycle, nothing more than one more fluctuation around a 2.5% trend rate, and if growth slows again by mid-'94, I think the bond rally will resume again at some point in 1994.

burdens of the last decade.

We still have burdensome government levels for state and local governments, federal government and individuals. If it were not for these burdens, we probably would have dealt with this recession more appropriately through fiscal stimulus. But our unwillingness to do that has created a major tax increase and spending reduction. It may not be quite as large as advertised. But it is still in the wrong direction and it is major. And on top of that, there are going to be health-care costs and tax increases to finance them which will be especially burdensome on small business. So we have an array of major burdens on an economy that is barely moving forward.

Much of what is happening also happened at the end of every major war. In that kind of period, there are financial dislocations, economic dislocations, employment dislocations, uncertainties that may create within them changes in how we view things. To me it is not just a matter of a difference of degree. It is far more than merely what differences in our

you go back to 1985, labor cost in the manufacturing sector were double that of Japan and 60% higher than Germany's. Today our manufacturing costs are below that of Japan and Germany is 60% higher than our. And I think what you are seeing today are changes in production flows that are the reverse of the early 'Eighties. We've moved production offshore because we couldn't compete. We are a lower-cost producer. Now you see the adjustments occurring in the European and Japanese manufacturers. More and more of our companies are moving production back home and I think it is because we have better growth prospects than they do and also because it is cheaper to produce here than over there.

Also, the average age of the capital stock is the highest in 40 years. To me that means we are going to have to rebuild our industrial infrastructure. It is going to be helped by foreign direct investment, but that's a plus. The other thing that I think is very important is that the market value of financial assets to the replacement value

What's Ahead?

Polled about the prospects for the 12 months ending June 30, 1994, Carson is the most optimistic about economic growth, while Braverman is the most pessimistic about interest rates and inflation. Benderly falls between the two.

	Braverman	Benderly	Carson
Gross Domestic Product*	1.5% - 2% (at best)	2% - 3%	3% - 4%
Jobs Growth	100,000/month	100,000-150,000/month	200,000/month
Unemployment	6.5% - 7% (on average)	6.5% (by 6/30/94)	6.5% (by 6/30/94)
Short-Term Interest Rates	moving lower	steady	moving higher
Long-Term Interest Rates	moving lower	steady-to-up	moving higher
Inflation (compared with prior 12 months)	much lower	lower	higher

*Annualized % growth

Q: What about short-term rates?

Benderly: Short-term rates should remain at their current levels, with no change in Fed policy.

Q: Any summing up?

Braverman: My concern is that the U.S. economy is now experiencing a sea change, a dramatic turnabout from inflation to disinflation with significant elements of deflation, which is a very dangerous aspect of the global economic scene. There is intense international competition to maintain market share. That means that the pressures to cut costs everywhere are intense. And these cost pressures are depressing business sentiment, depressing consumer sentiment, creating vulnerability for different sectors.

We have a major contraction in defense and the military, globally. We have a problem that I think goes beyond national borders, of downsizing, in part to deal with the credit

growth forecasts would suggest. Policy makers are still viewing the current situation as if it was just a replay of some other recovery. It isn't.

Q: Joe.

Carson: I would say that we are in a sea change, as well. But I would characterize it this way. We are in a transition relying less on old-age industries like defense and more on new-age industries like micro-electronics, computers and software, and capital goods. We're relying less on domestic markets and more on foreign markets for our growth. And this decade is going to be one of investment growth, not consumption growth. By that I mean that investment will probably grow by a factor of two or three times overall GDP growth.

The reason I'm optimistic on U.S. growth prospects, particularly investment, is because the U.S. manufacturing sector is a low-cost producer, at least among the G7 countries. If

of real assets is the highest in the postwar period. It basically means it is cheaper to build new assets today than to buy on Wall Street. Now, that's a major plus for investment.

Q: Jason?

Benderly: I think I would like to put myself between the two sea changes. It has been very easy to confuse the factors that have given us these short-term fluctuations of growth with the factors that determine the economy's trend. In the short run, I agree with Joe that growth is most likely going back up above 3% again. I think that will start in the fourth quarter. But over a longer period of time, that level of growth will be unsustainable. Growth will average closer to 2½%, and if I had to shade that, I would shade it in the downside. I think it is a fairly benign outlook, since it means no inflation or interest-rate pressures, but sufficient growth to keep profits in a positive uptrend.

Q: Thank you, gentlemen. ■

PREPARED STATEMENT OF JULIE GORTE

Manufacturing is essential to the economy of any advanced industrial nation, although it may directly account for only a modest share of employment. Maintaining healthy productivity growth, continually improving technology, devising mechanisms for technology diffusion, and training of workforces (white and blue collar) is necessary to assure the vitality of manufacturing, and if these are done, the payoffs will diffuse widely throughout the economy. If they are not, and manufacturing competitiveness suffers, the negative consequences also diffuse broadly. It is an oversimplification to say that over the past two decades, manufacturing competitiveness has fallen; a few sectors that were in deep trouble in the late 1980s have staged modest comebacks, and a few have remained dominant. But overall, increasing competitiveness on the part of foreign manufacturers has taken a toll; for example, it is probably a significant cause of the stagnant or falling standards of living that the majority of Americans suffered in the late 1970s and 1980s.

Manufacturing is important to the economy for several reasons. One is employment, as the Committee's concern indicates. In 1993, more than 18 million people worked in manufacturing (15 percent of the total employed population of the United States). Generally, manufacturing jobs pay better and have superior benefits than the average for production and nonsupervisory workers. People who lose manufacturing jobs typically find replacements only with either lower pay, fewer benefits, or both. For that reason alone, dwindling manufacturing employment is a concern.

Another reason for concern has to do with our balance of payments and the value of the dollar. Generally speaking, goods are more tradeable than services (with some exceptions); the majority of international trade is in goods, even with the rapid increase in trade in services over the past decade or two. In 1991, for example, U.S. goods exports were 2.5 times higher than services exports, and goods imports were 4 times higher than imports of services. As a large, rich nation, America is a prodigious consumer of goods; over the postwar period, manufactured goods consumption has accounted for roughly a quarter of GDP—in today's terms, about $1.5 trillion.[1] Most of the goods consumed here are produced here, but over the postwar period, imports have grown as a proportion of our consumption. Exports have grown too, but not as much as imports; trade deficits, which began to appear in the 1970s, became entrenched in the 1980s and 1990s, even with significant reductions in the value of the dollar. What all this means is that goods trade remains an important determinant of the value of the dollar, and the dollar's value, in turn, is an increasingly important determinant of our standard of living. The lower the dollar's value, the higher the prices consumers pay for imported goods, and the lower the revenues exporters get for their overseas sales. Both mean belt-tightening, all other things remaining the same.

While it was inevitable that American merchandise trade surpluses of the early postwar years would decline as the nations of Europe and Asia rebuilt their economies, the sustained deficits of the 1980s signaled something else: falling competitiveness. Beginning as early as the 1950s in a few, relatively low-technology sectors like textiles and apparel, American manufacturers began to experience increasing difficulty making sales abroad and even holding on to domestic customers as less expensive goods began coming in from

[1] Other goods include agricultural goods and fuels. Because of our dependency on fossil fuels, the U.S. currently runs large trade deficits in fuels, and that is expected to remain the case for the forseeable future. Surpluses in trade in agricultural goods have fluctuated with the value of the dollar; currently, our agricultural trade surplus offsets about two-thirds of our petroleum imports.

abroad. By the late 1970s, it was plain that some of the imports were competing not just on the basis of lower prices (often attributed, at the time at least, mostly to lower labor costs) but that competition based on predictably higher quality and better technology had also begun. By the early 1980s, for example, automobiles, consumer electronics and steel were being produced more efficiently and with better quality in Japan and a few other Asian nations and to some extent in Europe than in the United States. By the mid-1980s, competition based on better technology and higher quality extended into the highest-technology sectors of the economy—-semiconductors and computers, telecommunications equipment, and commercial aircraft. A few sectors—shipbuilding, several parts of consumer electronics, subcompact automobiles, certain types of semiconductors—disappeared almost entirely; others faced stiffer competition, lower revenues, and increasing difficulty in mobilizing to meet the new challenges. Following the recessions of the early 1980s, manufacturers began to place increasing emphasis on cutting costs and (to a lesser extent, at least initially) improving technology and product quality. Cost-cutting measures included cutting down on employment, beginning with heavy cuts in the ranks of blue collar workers and later extending to middle management. Benefits came under increasing pressure as well.

Cost cutting was an important step, but not effective at improving productivity or competitiveness. And productivity and quality improvement, in the long run, are much more sustainable sources of national well-being than cost reduction. A recent report on the effects on the United States to the proposed North American Free Trade Agreement, NAFTA, pointed out that the nation could follow variants of two development paths in response to the agreement. [2]One, a low-wage, low-productivity growth path, would seek lower costs primarily through measures like large economies of scale, oursourcing to low-wage locales, weak labor representation, minimal worker training, and limited advancement. Strategies like these have all been pursued by U.S. manufacturers in responding to foreign competition, and while they can be effective for a time, the net result is a general deskilling and impoverishment of the U.S. workforce, which in turn makes productivity growth and growing living standards harder to sustain throughout the economy. The other path is one of high wages and productivity growth, and it entails improving the quality of products, developing and diffusing technology, and upgrading the quality and representation of the workforce.

Declining employment in the late 1980s and early 1990s is a consequence of several things. One obvious cause is the recession. The domestic recession took a toll on manufacturing employment in 1991 and 1992, as recessions always do; the recessions in Japan and Europe are also partly to blame for the continuing sluggishness of the domestic economic recovery and depression in the labor market. Defense cutbacks, made possible by the end of the Cold War in the late 1980s, began to affect manufacturing employment in the late 1980s, and those effects are expected to continue for a few more years. Finally, continuing competitive challenges also put pressure on manufacturers to increase productivity and cut costs, both of which have a negative effect on employment. If productivity is improved enough, of course, the net employment result can still be positive as a result of increased sales; so far, however, the economic doldrums persist in most nations to which the U.S. economy is most closely tied, and sales and revenues remain slow. This is true even in industries whose competitiveness and productivity has improved. In semiconductors, for exam-

[2] U.S. Congress, Office of Technology Assessment, U.S.-Mexico Trade: Pulling Together or Pulling Apart?, ITA-ITE-545 (Washington, D.C.: U.S. Government Printing Office, October 1992).

ple, the U.S. industry has staged a comeback in the last five years or so, increasing its share of world markets compared with Japanese competitors (by far the most formidable of the competition) in semiconductors as well as semiconductor production equipment. Improvement in market share is partly a consequence of the fact that the Japanese market (which is particularly difficult for U.S. manufacturers to penetrate) has been more depressed than others. However, other indicators show that the increasing market share resulted from improvements in productivity and quality. Yet employment continues to fall in semiconductors, dropping from over 247,000 workers in 1988 (the worst year in terms of the industry's performance) to less than 213,000 in 1993. Workers in the industry are better-paid than most others, which reflects the improvements in productivity, but nonetheless there are fewer of them.

What responses can government make? First, it is probably inappropriate to select as a goal increasing manufacturing employment. More appropriate goals include helping to improve workers, productivity and quality. Employment may increase as a result of these improvements and economic conditions here and elsewhere, but even if it does not, the benefits of increased productivity will diffuse widely in the form of higher living standards and greater competitiveness. Yet the measures that are taken by nations whose overarching goal is to maintain or increase sectoral employment frequently result in pernicious effects on other parts of the economy, and in the end may not even meet the original objective.

Several OTA reports[3] have outlined options for intervention. The 1990 OTA report Making Things Better outlined four general categories of involvement, three of which are economywide: (1) reducing the cost and increasing the patience of capital, (2) improving the workforce, and (3) diffusing technology. The fourth, strategic technology partnerships between industry and governments aimed at developing new technologies in sectors that make disproportionately large contributions to national well-being, have a more specific focus. Competing Economies, and a new OTA report, Multinationals and the National Interest (released last month), added attention to international trade and investment policies as measures that could also affect competitiveness. The most important measures in each of these categories are outlined briefly below.

Measures to Reduce the Cost and Increase the Patience of Capital

Particularly in the 1970s and 1980s (and to some extent still), American manufacturers were faced with higher-cost or less patient capital than manufacturers in nations like Japan, Korea, and Germany that have mounted effective competition. Governments in these nations have taken many steps in the past to assure that manufacturers in general, or any enterprise in sectors considered critical to national well-being, had special access to capital on lower-cost terms, while lenders (sometimes in government, and sometimes reassured by government policies) were often more willing to wait for returns, or even refinance when borrowers ran into trouble. Government intervention in financial markets to arrange amenable terms for favored sectors has been waning in Japan and Germany, but manufacturers there still enjoy greater access to and cozier relationships with capital providers than is the case in the United States, where the pressure for short-term returns is still intense. Partly as a result of such pressures, big U.S. corporations have put off or foregone investments in

[3] These include Making Things Better: Competing in Manufacturing, released in 1990; Competing Economies: America, Europe, and the Pacific Rim, released in 1991, U.S.-Mexico Trade: Pulling Together or Pulling Apart?, released in 1992, and Worker Training: Competing in the New International Economy, released in 1990.

capital equipment or worker training and education, and increasingly prefer financing the research and development most likely to yield bottom-line returns in one to three years to R&D with a longer term or more uncertain payoff. Recession and higher capital costs have taken similar tolls in Japan and Germany, but capital investment rates and R&D growth remain higher in Japan than in the United States, and there are likely to be tougher times ahead as a result. Government can help to improve the capital cost situation for American manufacturers through economywide measures such as reducing the federal deficit and implementing a declining schedule of capital gains taxation on assets held for longer periods. More specific measures that would ease investment in new equipment and R&D could include implementing an investment tax credit and revision of the R&D tax credit to include a greater proportion of R&D expenditures. Currently, an issue facing many smaller manufacturers in particular is lack of access to bank financing; even though the recession is officially over, many (especially smaller enterprises) are having a tough time getting loans. This situation developed after OTA's work on competitiveness was delivered, so our reports suggest no options to remedy it; however, the issue needs addressing.

Measures to Improve the Workforce[4]

The U.S. workforce suffers from three kinds of skills deficits: basic skills deficits (e.g., in reading, writing, or simple arithmetic); in job- or task-specific technical skills (for example, operating a particular piece of equipment); and in problem solving whether individually or as part of working effectively in groups). Workers at all levels need more and better training to remedy these, especially the last. Implementing new forms of work organization, an essential part of productivity improvement, relies heavily on workers possessing problem solving and social skills.

Reorganizing work is becoming an essential part of competing in global markets. Increasingly, enterprises depend on a wide range of organizational innovations and technologies, such as continuous improvement, kanban (just-in-time production), statistical process control, and various forms of employee involvement to improve output and throughput. All of these technologies require that workers take on more responsibility for cost control and productivity enhancement, quality improvement, and rapid response to customers than was true in older, mass-production environments. Companies that perform better at tapping the skills and problem solving abilities of blue collar workers, in addition to stimulating white-collar innovation, are likely to do better in international competition.[5]

Measures to Increase Technology Diffusion

The pace of technological change is often faster than enterprise managers can cope with. This is particularly true of small and medium sized enterprises, which often have trouble learning about and understanding new production machinery and techniques, or soft production technologies such as continuous improvement and statistical process control. Even when they are aware that new technologies are available, it is difficult for smaller enterprises to afford the investments involved in adopting them. Japan and Germany both have

[4] This section is drawn from John A. Alic, Senior Associate, Office of Technology Assessment, "Making the Future Work: Technology, Workers, and the Workplace," Statement for the Record for the Committee on Labor and Human Resources, U.S. Senate, July 7, 1993.

[5] See, e.g., *U.S.-Mexico Trade: Pulling Together or Pulling Apart?* OTA-ITE-545 (Washington, DC: U.S. Government Printing Office, October 1992) discussions of the Xerox Corporation and the Saturn division of General Motors.

well-developed networks to inform small manufacturers of what technological improvements (hard and soft) they could make, and Japan, Korea, and other nations have extensive public subsidies for loans that enable small enterprises to adopt new technologies. In the United States, such systems of technological extension and information service are much more rudimentary, particularly at the federal level; a few States have well-developed manufacturing extension services, but they are typically much smaller than the potential demand for their services. At current levels, they can reach only a few percent of all small enterprises. Over the past 5 years or so, many promising approaches have been started, including parts of the recently authorized Technology Reinvestment Program. Over the next several years, learning from and expanding on the most promising of these new technology extension efforts is warranted.

Strategic Technology Policy

Some sectors, or industries, make disproportionately large contributions to national well-being, often because their products enhance productivity as they diffuse downstream, or influence those upstream to improve. Some create exceptionally well-paid jobs or make disproportionate contributions to knowledge and technology. Where nations have successfully targeted such industries for faster development, economic development is generally more rapid than otherwise—barring, of course, exceptionally poor governmental performance in other areas. One approach that has paid off in many nations (including the United States) is government sharing the costs of technology development in critical industries where costs or risks are particularly high. While there have been failures (e.g., synfuels; Japan's attempt to promote civilian aircraft assembly), the successful uses of technology development partnerships have paid off in cases like American agriculture and aeronautics; Japanese microelectronics, machine tools, and computers; and European aeronautics. The U.S. Government has long been a partner with the private sector in developing technologies, but until recently, the rationale for most of the government's investment was for public goods like national defense and health care (civilian aircraft is an exception).

In the past few years, some small programs of public cost-sharing in civilian technology development have been started. One example is the Advanced Technology Program (ATP) of NIST, which in the few years of its operation has gained a reputation for sensible management and promising investment. Early evaluations of the program show that it continues to look promising. The Administration plans a significant expansion of the ATP, with funding targeted for $750 million in 1998. Another approach is to turn the attention of the nation's federal laboratories more firmly toward developing commercial technologies together with private firms and universities, using mechanisms like Cooperative Research and Development Agreements (which, in the case of the Department of Energy, need improvement),[6] Space Act Agreements, Superconductivity Pilot Center Agreements, and the like.

Trade and Investment Policies

National policies regarding international trade and direct investment among developed countries have, although nominally governed by consistent sets of rules or conventions like the GATT and OECD policies, significant inconsistencies. The inconsistencies often arise more in the way national trade

[6] See U.S. Congress, Office of Technology Assessment, Defense Conversion: Redirecting R&D, OTA-ITE-552 (Washington, D.C.: U.S. Government Printing Office, May 1993), and U.S. Congress, Office of Technology Assessment, Contributions of the DOE Weapons Laboratories and NIST to Semiconductor Technology, forthcoming, for a discussion of CRADAs and other partnership arrangements with national laboratories.

laws or conventions are implemented rather than the rules themselves. Even with decades of effort devoted to leveling the international trade and investment playing fields, these inconsistencies not only persist, but some analysts maintain that they are growing more important. Many nations, the United States included, have attempted to use the blunt instruments provided by laws aimed at assuring fair and free trade to boost the fortunes of a particular industry, and while the effects usually distort trade, the effects on competitiveness are uncertain. Two strategies could be followed (or many variants on these). The one the United States has consistently opted for throughout the postwar period is to expand and strengthen international rules and conventions governing free and fair trade, possibly through the creation of an international enforcement authority that could provide the discipline that the GATT is often perceived as lacking. Another path is to pursue the first alternative with a smaller group of nations truly interested in free trade, and adopt a more proactive approach toward trade and investment with nations that opt for promotion of national industries more often than pursuing the principles of free trade and nationality-blind investment. The latter approach might include measures such as reciprocity clauses governing foreign-owned firms' participation in U.S. Government-sponsored technology programs and numerical targets for market share in nations where more traditional measures have failed.

WRITTEN OPENING STATEMENT OF REPRESENTATIVE RAMSTAD

Mr. Chairman, I am pleased to welcome our distinguished panelists here this morning to discuss one of the most critical issues facing our nation.

I must say that I am extremely concerned that today's tax and regulatory environment makes it increasingly difficult for the m anufacturing companies in this country to continue to innovate and compete.

And President Clint's tax bill—the largest tax increase in history—will only exacerbate the current situation. You sijply cannot stimulate economic growth and job creation by taking hundreds of billions of dollars worth of capital out of the productive private sector to finance further government expansion.

Minnesota's "Medical Alley" is a concentration of hundreds of biomedical technology companies in my Congressional district. It is clear to me that one of our industrial sectors that offers the most potential growth for job creation is technology. But the "technology policy" I support differs dramatically from the Clinton Administration's proposal to put the government in charge of innovation. It's proposal simply does not address the fundamental problem facing our high-tech companies.

Government doesn't innovate and doesn't creat jobs—small businesses do. We all know that small businesses provide 85% of all new jobs in this country. But according to the SBA, small businesses also provide about 2.4 times as many innovations per employee as large firms.

Instad of increasing the government's control of the high-tech manufacturing industries in our economy, we must reduce governmental obstacles—taxes and regulations—to private sector initiative.

Lowering taxes to reduce the cost of capital is an essential component of promoting a strong technological base.

I refer you to a column, which I inserted in the record at an earlier hearing of this Committee, published in the *Wall Street Journal* in April. It was written by entrepreneur T.J. Rodgers, who built Cypress Semiconductor from a one-c omputer company to a corporation that has, in its 10-year history, generated over a billion dollars in cumulative revenue, made more than $160 million profits—on which it paid $60 million in taxes—created 1,500 jobs and paid cumulative salaries of nearly $500 million, on which employees paid taxes of $150 million.

Rodgers' column, entitled "What Silicon Valley Needs from Clinton," rejects the President's call for subsidizing high-tech companies. Instead, he urges the President to imporve th financial infrastructure by increasing the supply of capital by reducing federal spending and decreasing the capital gains tax—not by creating government-funded research programs.

Murrya Weidenbaum of the Center for the Study of American Business urged similar action on "technology policy" in the *Harvard Business Review* a year ago. he wrote, "The availability of capital to develop technology is another crucial element. During the 1970s and the early 1980s, venture cpaital fueled entire new industries, such as semiconductors and biotechnology. Over the past five years, venture funding has steadily decline." We all know the capital gains tax rate was reduced in 1978 and raised again in 1986. There should be no question about the correlation between the availability of capital and the taxes imposed on capital gains.

The other main issue facing manufacturers is excessive government regulations. A perfect example of overregulation involves several of the Medical Alleg companies located in my district of the Twin Cities area of Minnesota.

One of these companies, Medtronic, developed the first wearable external cardiac pacemaker in 1957 and manufactured the first reliable implantable pacing system in 1960. Since then, Medtronic has been the world's leading producer of pacing technology. Earl Bakken, the founder of Medtronic, has often said he could not start Medtronic in today's regulatory environment.

Other biomedical companies in my district have told me chilling stories about the bureaucratic hoops that they are made to jump through to get approval form the FDA for their products. I hear regularly about instances where the FDA was supposed to review proposals within 90 days, but after 300 days, companies are still waiting for an answer. Government regulations tha tmake it difficult for companies to predict when they might take a product to market literally make it impossible to attract investors and sustain the innovative, job-creating enterprises that should serve as a the foundaiton of our nation's economy in the next century.

When government agencies adopt such an adversarial stance, companies are literally regulated out of business—and the American public suffers. Loss of innovation through overregulation will have a direct impact on the health of our economy and our citizens.

Mr. Chairman, I am very much looking forward to today's testimony.

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